MIDWEST DEALER ISSUE
Pages 9-16

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FOR RICHER FIELDS

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orer Numbers own, But Serious nfestation Possible

Illinois, Maryland, Iowa Areas Face Biggest 1956 Threat

WASHINGTON — Despite a decease in European corn borers between 1954 and 1955 in several Corn Belt states, considerable numbers of these pests are now present over much of the corn-producing area, the U.S. Department of Agriculture reports.

Borer populations are sufficient, the department says, to cause serious infestations in 1956 corn, if coming weather conditions favor the insect.

Surveys were conducted in the fall by agricultural agencies in 23 states to determine the abundance and distribution of the borer, one of the most costly insect pests of U.S. corn. Information obtained from these surveys has been summarized by USDA's Agricultural Research Service.

If weather favors this insect's survival and development, eastern and northwestern Illinois, southeastern

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Inside You'll Find

Olin Mathieson Merges East, West Fertilizer Divisions

NEW YORK — The eastern and western fertilizer divisions of Olin Mathieson Chemical Corp. have been combined under the direction of S. L. Nevins, vice president of the corporation, with headquarters in Little Rock, Ark. This announcement was issued by T. S. Nichols, president of Olin Mathieson, Jan. 5.

Mr. Nichols also announced the appointment of Edward Block as executive vice president with responsibility for the operation of the phosphate chemical and plant food divisions, including the Blockson plant, the Baltimore plant and the former eastern and western fertilizer divisions.

Mr. Block, a director of the corporation, was president of Blockson Chemical Co., Joliet, Ill., prior to its recent purchase by Olin Mathieson. His headquarters will be in Joliet.

Responsibility for the operation of the Morgantown, W. Va., plant has been transferred from the former eastern fertilizer division to the industrial chemical division.

D. W. Drummond, vice president of the corporation, Baltimore, will be responsible for the operation of the industrial chemical and hydrocarbon divisions, including the Morgantown plant.

R. L. Hockley, vice president, will head the operations of the insecticide division with headquarters in Baltimore, the announcement stated.

New Division Name

ST. LOUIS — Monsanto Chemical Co.'s Merchandising Division is known as the company's "Consumer Products Division" effective Jan. 1, Roy L. Brandenburger, vice president of the company and general manager of the division, has announced.

President to Urge Soil Bank in Farm Message to Congress

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON—President Eisenhower in his state of the union message to Congress Jan. 5 forecast a balanced budget at the close of the fiscal year ending June 30 and the same balanced budget condition for the following fiscal year ending on June 30, 1957.

With this strong note of encouragement, the chief executive moved directly into the most troublesome aspect of the national economy, that of agriculture. He mentioned the income squeeze on the farm community between rising costs and declining income.

The President said that a farm message would take primary importance in his plans and would be sent to Congress Jan. 9.

Highlighting some of the features of that prospective message, the President stated that he would recommend a soil bank to handle the problem of diverted acres and to correct the overexpanded agricultural plant.

It has been predicted that the soil bank will take two specific forms. One will be a payment in kind to farmers who voluntarily take land out of cultivation. That aspect is a short range corrective measure designed to halt use of diverted acres

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Burley, Maryland, Virginia Sun-Cured Tobacco Quotas Voted

WASHINGTON — Growers of burley, Virginia sun-cured, and Maryland tobaccos approved marketing quotas for their 1956, 1957 and 1958 tobacco crops in referenda held Dec. 29, according to preliminary results received by the U.S. Department of Agriculture.

Growers of Pennsylvania cigar-filler tobacco disapproved marketing quotas in a referendum on the same date. Approval by at least two-thirds of the growers voting is required before marketing quotas can be placed in effect.

The vote by Pennsylvania cigar-filler tobacco growers marked the third successive year since 1952 in which they have voted disapproval of the quotas. Therefore, as provided by law, there will not be another referendum on this kind of tobacco for a three-year period, regardless of the supply situation, unless at least 25% of the growers petition the secretary of agriculture to hold a referendum. In the preliminary tabulation of 1880 votes, 210 or 11.2% approved quotas and 88.8% disapproved.

Maryland tobacco growers approved quotas with 5,539, or 80.7%, of the total of 6,864 votes being in favor. Producers of Virginia sun-cured tobacco approved quotas with 1,379, or 98.1%, of the total of 1,405 voting "for" quotas.

Ammonium Sulfate Facility Planned

SPOKANE, WASH.—A new plant for manufacturing zinc oxide and ammonium sulfate will be in operation on the eastern outskirts of Spokane within six weeks, Bernard Wilcox, president of the Northwest Refining and Chemical Co., has announced.

Ammonium sulfate will be manufactured as a by-product of the zinc oxide process. The plant will be served by spur lines from two railroads. Zinc ore will be brought to Spokane from the Coeur d'Alene mining area to the east and the Stevens County mining area northwest of Spokane.

USDA Trims Rice Acreage Allotments

WASHINGTON—A national rice acreage allotment of 1,639,984 acres has been set by the U.S. Department of Agriculture. This is a reduction from the final national allotment of 1,928,334 acres for the 1955 rice crop.

USDA also proclaimed a national marketing quota based on the allotted acreage, set Jan. 27 as the date for a referendum on the quotas and established the minimum national average support price for rice at $4.04 cwt.

If marketing quotas are approved in the referendum, price support will be available to eligible producers at not less than the national average price of $4.04 cwt. Individual farm marketing quotas will be the actual production from the farm acreage allotment, as apportioned from the state allotments.

Rice Acreage Allotments

State	1956 Allotment (acres)	1955 Allotment (acres)
Arizona	10	269
Arkansas	399,084	453,850
California	297,100	352,729
Florida	887	1,126
Illinois	11	24
Louisiana	460,704	558,934
Mississippi	41,422	54,921
Missouri	3,673	5,388
North Carolina	27	34
Oklahoma	38	175
South Carolina	1,958	3,350
Tennessee	517	605
Texas	421,360	496,929
	1,626,791	
National Reserve	12,293	
TOTAL	1,639,084	1,928,334

Weed Control Tests Reported As National Group's Charter Meeting Is Held in New York

By WALTER C. SMITH
Croplife Editorial Staff

NEW YORK—The present role of modern weed control as a "new science" and its future potentialities provided the theme for the charter meeting of the Weed Society of America here Jan. 4-5.

More than 415 were present at the Jan. 4 general session. The society's charter meeting was held at the Hotel New Yorker in conjunction with the 10th annual meeting of the Northeastern Weed Control Conference, host to the national meeting. The northeastern group held its business meeting and five concurrent panel discussions during the morning of Jan. 6.

Particularly stressed at the society's general session on Jan. 4 were problems, progress and organization of weed control in the U.S. and Canada. The need for reducing farmers' production costs and the educational and research problems associated with weed control were emphasized by several speakers.

The important place of weed control in American agriculture was pointed out by Byron T. Shaw, administrator, Agricultural Research Service, U.S. Department of Agriculture. He said that weeds cost American farmers four billion dollars a year, an amount nearly equal to the value of the nation's entire corn crop.

Two opportunities of immediate importance, Mr. Shaw said, are helping farmers improve their present economic position and helping them adjust their operation to meet the changes in demand for farm com-

(Continued on page 20)

Over 1,000 to Attend Western Weed Conference

SACRAMENTO—More than 1,000 delegates are expected to attend the joint sessions of the Western Weed Control Conference and the California Weed Conference in Sacramento, Feb. 15-16, and in Davis Feb. 17.

Conference sessions in Sacramento will be held at Governor's Hall on the State Fair Grounds. Sessions at the University of California in Davis will be held at University Airport.

Special invitations have been issued to farmers, representatives of chemical companies manufacturing weed control materials, state and federal weed control workers, irrigation and reclamation officials, county agricultural commissioners, farm advisors, farm equipment manufacturers and distributors, agricultural pest control operators, farm publication editors and others.

Arrangements for the joint conference are being made by Walter S. Ball, Sacramento, president of the Western Weed Confrol Conference, and Paul F. Dresher, San Jose, president of the California Weed Conference. Mr. Ball is chief of the Bureau of Rodent and Weed Control and Seed Inspection, California Department of Agriculture. Mr. Dresher is a representative of the American Chemical Paint Co.

Other officials of the Western Weed Control Conference are W. A. Harvey, vice president, extension weed control specialist, University of California, Davis and Dr. W. C. Robocher, secretary-treasurer, federal agronomist of Reno, Nev.

Officers of the California conference also include James W. Koehler, district supervisor of rodent and weed control, California Department of Agriculture, Los Angeles; Dr. O. A. Leonard, secretary, assistant professor of botany, University of California, Davis, and J. T. Vedder, treasurer, Chipman Chemical Co., Bakersfield, Cal.

Group Formed to Study Water Conservation

SAN ANTONIO, TEXAS — A new organization, the Southwest Cooperative Project on Control of Evaporation of Water from Reservoirs, was formed at a conference held here recently to discuss water losses through evaporation. It was pointed out at the meeting that Texas is losing almost as much water through this means as it uses each year.

Col. E. V. Spence, Big Spring, Texas, general manager of the Colorado River Municipal Water District, was appointed committee chairman. The committee endorsed an 18-month water conservation research program to be done at the Southwest Research Center.

W. L. Popham Name Head of USDA Cro Regulatory Work

WASHINGTON — Appointmen Dr. W. L. Popham as director crops regulatory programs for Agricultural Research Service, ef tive Jan. 1, has been announced Dr. Byron T. Shaw, research adm istrator of the U.S. Department Agriculture.

Dr. Popham, in charge of USD plant pest control work since 1 succeeds Dr. Avery S. Hoyt, chie the former Bureau of Entomol and Plant Quarantine, who has rected crops regulatory programs the department since 1953. Dr. H retired Dec. 31 after 25 years of s ice in the department as a top ministrator of entomological resea and plant pest control activities.

For the past 44 years, Dr. H has played an active part in state federal work to protect the nati agriculture from insect and pla disease pests. He is internation recognized as an authority on pla quarantine matters and for a num of years directed USDA research insects and insecticides.

Dr. Popham has wide experienc direction of large-scale cooperat programs for control of plant disea and insect pests, and in enforcem of federal plant quarantines. Thro direction of USDA pesticide regist tion and labeling activities, he kept in close touch with the pr lems involved in the manufacture distribution of insecticides.

A native of San Diego, Cal., Hoyt received his B.S. degree fr Pomona College in 1910. The coll awarded him the honorary degree doctor of science in June of 1955. 1912 he joined the California St Department of Agriculture as an tomologist in port-inspection wo He was appointed director of that partment in 1929. In 1931, he cepted appointment as assist chief of the U.S. Department of Ag culture's Plant Quarantine and C trol Administration, which beca part of the Bureau of Entomol and Plant Quarantine in 1934.

From 1934 to 1950, as assist chief and later associate chief of bureau, he aided in the developm of federal quarantine laws governi importation of foreign agricultu products to exclude plant pests th would jeopardize American agric ture. He was concerned also w developing domestic regulations quarantines affecting shipment of fested plants and plant products.

Dr. Hoyt was given a meritori promotion in 1942, and in 1950 was named chief of the bureau. F lowing the 1953 departmental re ganization, he was appointed direct of all USDA crops regulatory p grams.

Dr. Popham was born in Corval Mont., and holds B.S. and D.Sc. grees in agriculture from Monta State College. He served in t Marine Corps during World War and joined USDA's Bureau of Pl Industry in 1922 in Montana, wh he worked on barberry eradicati for control of black stem rust. was transferred to Washington, D in 1931 as supervisor of plant-dise control operations. With the re ganization of the department he w made chief of the Plant Pest Contr Branch.

In New CSC Post

NEW YORK — Marion E. Tisl has joined the market developm department of Commercial Solve Corp., it was announced recently Dr. Frank E. Dolian, manager of department. Mr. Tislow, a gradu chemical engineer, is assigned to technical service section with offi at Terre Haute, Ind. A CSC employ since 1951, Mr. Tislow was most r cently a production supervisor in company's bacitracin plant.

INSECT AND PLANT DISEASE NOTES

South Dakota Recounts 1955 Pest Experiences

COLLEGE STATION, S.D. — A summary of insect conditions for 1955 has been given by T. A. Burge, G. B. Spawn, J. A. Lofgren and W. M. Hantsbarger for the Economic Insect Survey Section, Plant Pest Control Branch, Agricultural Research Service, USDA. Portions of this report follow:

Army cutworm infestations were reported from several sections, mainly in Tripp, Gregory, Brule, Aurora, Douglas, Davison, Charles Mix, Dewey and Butte Counties. Most damage was to alfalfa in early spring with but slight marginal damage to wheat. Losses were estimated at approximately $60,000 and approximately 6,500 acres were treated for control.

European corn borer surveys in early spring indicated a winter survival of approximately 75%. Pupation was underway by May 7. Conditions for egg laying were favorable in some areas where corn was not far enough advanced to be attractive for egg deposition but cool nights delayed egg laying over a longer period so that the majority of eggs was deposited after June 15.

Eggs hatched during the first part of July and shot-hole injury was quite prevalent over the State by July 15. Pupation started the last week in July and reached 50% in the east central region by August 12. Flight of second-brood moths was quite heavy with some fairly high second-generation egg counts. Development of the second brood was not as severe as anticipated. The fall survey indicates an average of 121 borers per 100 plants for counties surveyed.

By the last week of May, grasshopper eggs had started to hatch. Weather at this time was quite favorable for development. Cool and wet weather the latter part of June took a heavy toll of nymphs, especially in the central regions. The result was light, scattered infestations of M. differentialis and M. mexicanus in the central counties and west of the Missouri River with Camnula pellucida dominant in the hay meadows of western Pennington County.

Infestations east of the Missouri River ran from light to threatening mainly in legumes with the dominant species being M. femur-rubrum. The egg survey in most instances corroborated the findings of the adult survey. Losses due to grasshoppers in 1955 are estimated at $483,700 and there were approximately 97,000 acres treated for control.

Corn earworm was quite prevalent in 1955, especially in the more eastern areas. In some fields two lar... per ten plants were found. Adults ... Southern corn rootworm were ... tremely numerous, especially in ... southeastern portion of the Sta... although they were found as ... north as Marshall County. Beet... were found on a number of plan... including squash, cucumbers, ... flowers, goldenrods, alfalfa and co...

A summary article on the sta... of European corn borer begins ... page 1 this issue. In connection w... the article, a map showing distri... tion and abundance of this pest ... pears on page 18.—Editor

Adults of Western corn rootwo... were found feeding upon corn si... in Bon Homme and Moody Counti... Corn leaf aphid was very abunda... on corn earlier in the season ... predators and warm, dry weather ... duced the numbers to non-econo... levels. English grain aphid and co... leaf aphid infestations were fou... throughout the State on small gra... especially oats and barley. Some da... age occurred to late barley.

Alfalfa weevil infestations of ec... nomic importance were confined ... the Black Hills area although th... insect continues to spread eas... ward. Adults and larvae wer... picked up almost to the easter... edge of Perkins County. Approxi... mately 21,000 acres were treate... for alfalfa weevil control. Bliste... beetles, predominantly Epicaut... pennsylvanica and E. fabricii, wer... very numerous in alfalfa fields ... the central regions, where som... local injury occurred. In some area... counts reached 42 beetles per ... net sweeps.

Six-spotted leafhopper was abu... dant in alfalfa throughout the ea... ern part of the State, particular... in Sept., when counts reached 2... adults per 10 net sweeps.

High populations of pea aphid wa... encountered earlier in the summ... with counts up to 1,360 per 10 ... sweeps in alfalfa. Infestations d... creased by July 10 due to hot, d... weather and also because of pred... tors, especially lady beetles, whi... were numerous. Sweetclover weevi... were active early in the season, fee... ing on both old clover and new see... lings. Some damage occurred to ne... seedings in some areas.

Clover seed chalcid was quite pre... alent in alfalfa. Many areas report... damage to seed crops, especially ... south central areas. Tarnished pla... bug was not aboundant althou... found commonly in clover and alfalf... Highest average infestations observe... were about 3 per net sweep.

Alfalfa plant bug occurred in abo... the same numbers as Lygus with ... to 4.2 per net sweep. Rapid plant bu... was prevalent in alfalfa and clov... but never in economic numbers.

Among vegetable crop pests, se... eral species of aphids were troubl... some to a number of vegetable crop... especially potatoes and tomatoe... Potato leafhopper was abundant ... untreated potatoes and "hopperburn" ... was noted from several localities. ... Squash bug occurred in greater num... bers than usual in eastern area... feeding on various vine crops, inclu... ing melons and squashes. Spotted an... striped cucumber beetles were ver... abundant in gardens throughout th... eastern counties.

Florida Reports Winter Activities of Insects

GAINESVILLE, FLA.—Three sp... cies of leafhoppers in various stage... of development were found in Lee... burg, Lake County, in recent i... vestigations. More Nesosteles incis... (Matsu.) leafhoppers were fou... than any other kind.

In Hillsborough County, Fla., soft brown scale (Coccus hesperidum, (L.)), in the nymphal stage, averaging 50 to 100 per leaf were

lected on citrus. Long scale was o found here.

veraging one per leaf, the insect ilid in the larval stage was col- ed on guava plants at Lucerne k, Polk County, it has been re- ted.

Numerous pests of forest, orna- ntal and shade trees have been nd in various locations in Florida, has been reported by the cooper- e insect pest survey. These in- s included chrysanthemum aphid, sduval's scale, Cactus scale, Flor- red scale, Latania scale, peony le, long-tailed mealybug, pustule le, proteus scale, tea scale and oanut scale.

w Jersey Workers Say ny Corn Borers in '56

NEW BRUNSWICK, N.J. — A rp increase in populations of Euro- n corn borer in New Jersey has mpted the extension service of gers University and the Agricul- al Experiment Station to predict t the state "will have more trou- from borer this year, and if ather conditions are mild and fair ing May, we could have plenty trouble on young sweet corn and d corn."

Spittlebug populations are below ormal in New Jersey and indica- ons are that damage will not be severe as usual in Burlington, onmouth and Middlesex counties 1956.

Activity of alfalfa weevil in the (egg laying) is noticeable as far th as Stockton in Hunterdon unty, Monmouth Junction, Colt's k in Monmouth County. "It looks if we will see some damage as north as this line in 1956," the tion reports. It adds that damage ow Trenton will be heavy in most ds.

S. Gordon Named hilean Nitrate strict Manager

NEW YORK—Appointment of H. (Bill) Gordon, Jr. as district man- r of the Jackson, Miss. office of Chilean Nitrate Sales Corp. has n announced by J. F. Doetsch, sident of the corporation.

Mr. Gordon for a number of years been with the Chilean Nitrate anization with headquarters in ntgomery, Ala. W. H. Milan, re- ng district manager at Jackson, l continue with the corporation as consultant.

onsanto's Penta eets Requirements f Miller Amendment

ST. LOUIS — Monsanto Chemical 's pentachlorophenol can be used a preharvest desiccant on cotton thout hazard to food or feed in judgment of the Food and Drug ministration, according to recent rd from that agency reported by company's Organic Chemicals Di- on.

The dosage and timing of applica- n proposed by Monsanto "will not ult in any appreciable residue" in ton food or feed products, the FDA quoted as stating. The agency does foresee any objection to such use penta under provisions of the Fed- Food, Drug and Cosmetic Act, nsanto said.

ORE FERTILIZER NEEDED

OSCOW, IDAHO — Although o farmers now are using more n twice as much fertilizer as they five years ago, the amount is still w that needed for maximum pro- ion, according to Charles Painter, versity of Idaho extension soils ialist. Fertilizer use in the state ss than 30 lb. an acre.

Program Set for Michigan Insecticide, Fungicide Conference

EAST LANSING, MICH.—The annual Michigan Insecticide-Fungicide Conference, which will cover such topics as nematodes, weed control, the Miller Bill, fire blight and others, will be held Jan. 10-11 at Kellogg Center, Michigan State University.

Sponsored by the M.S.U. departments of entomology, botany and plant pathology and horticulture, the conference is presented in cooperation with the Michigan Insecticide-Fungicide Institute. Frank Parmalee of the E Z Flo Chemical Co., Lansing, is president of the institute.

The conference will begin at 9:15 a.m., Jan. 10, with a welcome by Lloyd M. Turk, director, Michigan Agriculture Experiment Station. The first general session will devote about two hours to "The Miller Bill and You." Ray Hutson head of the M.S.U. Department of Entomology, will preside.

The morning session also will include a discussion by Buford H. Grigsby of the M.S.U. Department of Botany and Plant Pathology, on "The Latest on Weed Control."

The afternoon session Jan. 10, led by Ray L. Janes, Department of Entomology, will consider "Problems With Potatoes," "Nematodes — An Old Problem and New Ideas," and "Systemic Insecticides." The nematodes presentation will be by representatives of the Dow Chemical Co., Shell Development Co., Stauffer Chemical Co., and by John Knierim, Department of Entomology.

J. R. Hoffman, Department of Entomology, will be chairman of the Jan. 11 morning session. Stan Cath of the Michigan Department of Agriculture, will discuss "The Gypsy Moth in Michigan." Other experts will talk about "Field Experiences With Fungicides" and "Vegetable and Fruit Problems of 1955." A movie about the Dutch Elm Disease also will be shown in the morning.

William Drew, head of the M.S.U. Department of Botany and Plant Pathology, will preside for the Jan. 11 afternoon session, which will feature a panel of horticultural agents, and also a discussion of "Fire Blight in 1955."

New Mexico Dealers To Meet Jan. 15-17

ALBUQUERQUE—W. E. Irwin of the Phillips Chemical Co. fertilizer division, Bartlesville, Okla., has accepted an invitation to speak at the New Mexico Grain & Feed Dealers Assn. convention here at the Hilton Hotel Jan. 15-17. A special emphasis is being placed on agricultural chemicals topics this year in response to a number of requests from retailers of both feed and fertilizers, says Austin Brooks of Clovis, state president.

Accomplishments of 1955 Are Reviewed as Ohio Pesticide Institute Holds Conference

WOOSTER, OHIO—Subjects covered at the recent meeting of the Ohio Pesticide Institute here covered a wide range of chemical controls for insects, plant diseases and weeds. A discussion of the effect of the Miller Bill on both the industry and growers was also on the program agenda.

In his review of the Miller Bill, Dr. H. C. Young, Ohio Agricultural Experiment Station, offered a summary of information gathered from various sources, including the Food & Drug Administration, the National Agricultural Chemicals Assn. and College and University personnel.

Dr. Young told his audience of more than 100 persons representing the pesticide industry, dealers and experiment station personnel that responsibility for carrying out the provisions of the Miller Bill rests upon a number of groups. The food processor must be sure his product complies with all tolerances; the state and government people must be positive that their recommendations are in accordance with tolerances and residues and that their recommendations will not cause excessive amounts of residues under either normal or other conditions.

It was pointed out that the salesman with the label and the dealer armed with useful information are the dominant points for the protection of the grower. However, the ultimate responsibility insofar as use on the proper crop, timing, amount to use and handling of material, is largely with the manufacturer and dealer.

Growers were urged not to do experimental work on their own, with materials for which no tolerance nor control program have been established. In so doing, they are responsible for their product throughout its market journey down to the consumer's table.

L. H. Rolston, in discussing cereal crop insects, emphasized the importance of frequent insecticide applications. He said the importance of this is illustrated in the case of corn flea beetle where corn treated with one pound of DDT per acre had 3 to 4% as many flea beetles as untreated corn during the first three days following the application. On the sixth day, the number of flea beetles on the treated plots reached a dangerous level, although there was only one quarter as many as on the checks. One half pound of DDT per acre did not provide adequate protection for a three-day period.

L. Williams of the experiment station said that the annual loss in Ohio due to diseases of corn, wheat and oats amounts to at least $30 million. These losses can be reduced, but not entirely eliminated, he said, by the adoption of known control measures.

Seed treatment is the only feasible chemical control measure available for cereal crops today, but the work with calcium sulfamate in the experimental control of wheat rusts indicates that materials will be found which not only will be effective but economical for use in the control of cereal diseases, he said.

In a paper on grain sanitation L. E. Folsom declared that the quantity of weevil and rodent matter in wheat and flour is probably much less than the tolerances adopted by the Food & Drug Administration. This is largely due, he said, to the pressure exerted by consumers who demand constantly improved quality in everything they buy. "Processors will provide that quality in accordance with consumer demand," he said. "Those who don't, will not stay in business."

The speaker continued by saying that there will be a continuing and increasing demand for skills and materials and services for control of insects and rodents. We will have grain sanitation, he said, because the consumer, through the market, will demand and get high quality cereal products.

Mr. Folsom declared that since foreign matter such as rodent hairs and insect fragments in grain have never been actually demonstrated to be detrimental to human health, they are objectionable from an esthetic standpoint. He then concluded saying "protection of health and prevention of fraud are proper functions of a government bureau. In a free, competitive, capitalistic enterprise system, operating in a democracy, enforcement of purely esthetic values belongs in the market place."

In a talk covering progress made in control of fruit diseases in Ohio, H. F. Winter said that for early season use, the organic mercury materials are effective and satisfactory for apple scab control. Used in an "after rains" program, these materials have given equal or better control of scab than "protective" type fungicides, he said. In addition, fewer spray applications per year were required for the "after rains" program.

Dr. Winter reported that tests with Streptomycin sprays for the control of fireblight during 1955 were at variance with those of the two previous seasons. Excellent control of this disease on apples and pears was obtained on inoculated trees in 1953 and 1954, he said, but only mediocre control was obtained during the past season. It is theorized that temperature differences during the critical blossoming periods may account for the differences in results obtained in the several seasons. These antibiotic sprays, however, are still being suggested for control of fireblight in Ohio.

The speaker also called attention to the increasing prevalence of powdery mildew on apples in Ohio, stating that this disease may become an acute problem in some orchards and on some apple varieties. "This may cause a shift back to the use of more sulfur in the apple spray program," he predicted.

Control of apple pests in Ohio during the past season was discussed by C. R. Cutright of the Ohio station. He reviewed efforts made to control pests such as the codling moth, European red mite, red-banded leaf roller, apple maggot, curculio, San Jose scale, apple leafhoppers and rosy apple and apple aphid.

Effective control programs kept injury from codling moth to a minimum throughout Ohio, he reported. But in the case of European red mite, this pest developed resistance to parathion, EPN, malathion and TEPP, but is still susceptible to products such as Ovotran, Aramite, Systox, chlorobenzilate and Dimite, Mr. Cutright said.

"Experimental work has shown that miticides applied in early season, ie., in the pink and petal-fall or the petal-fall and first cover, are quite effective. If no oil is used, this system of timing is now being generally advised," he added.

The past season was one of severe injury by the apple maggot, it was reported. Not only were unsprayed or poorly sprayed apples attacked, but also injury was noted in several commercial orchards. The flies emerged earlier than usual and large numbers of second brood adults appeared in late August and September.

Roy W. Rings presented a summary of the peach insect situation for 1955, pointing out that a greater portion of the Ohio crop was damaged during this season than in any year since 1950. He said that the significant increase in total insect damage in 1955 was due to an unusual abundance of grasshoppers and red-banded leaf rollers, although both the Oriental fruit moth and plum curculio damage was slightly above the five-year average.

C. R. Neiswander, in discussing soil insects on field crops, stated that the damage from species such as corn rootworms is perhaps not as severe in Ohio as in states farther West because of the crop rotation practices followed in Ohio.

Accordingly, no general recommendation on soil treatment for seed or root insect control is issued. However, for farmers who frequently have trouble in getting crop stands because of seed or root insect injury and for those who have crop lodging because of root insect damage, soil treatment with either aldrin or heptachlor was suggested. These materials can be applied broadcast at time of seed bed preparation or they can be applied as a band treatment in the row with or without starter fertilizer. Either insecticide may be used at the rate of ½ lb. to ¾ lb. an acre in the band treatment and 2 lb. an acre broadcast, he said.

Problems involved in the control of soil diseases were outlined by A. F. Schmitthenner of the Ohio station. He pointed out that wilt diseases caused by soil-borne fungi and bacteria are the most difficult to control, but that the Ohio station is investigating partial fumigation methods by rototilling volatile fungicides and nematocides into the soil. This method may, he said, prove effective and economical enough for more general use with field crops.

Soil-borne root rot diseases are also difficult to control, he said, but one method showing promise of success has been the application of fungicides to the soil. This is done either in the row, rototilled in strips, or broadcast and disced in. Black root of sugar beets has been partially controlled through the application of 4 lb. Arasan in the row with high phosphate fertilizer, he said.

Application of PCNB has been successful against Rhizoctonia, Sclerotinia, the potato scab organism and the club root fungus. Row application of fungicides may prove effective against other root rots in the future, he predicted.

Weed control in field crops was covered by Dr. C. J. Willard, Ohio State University, Columbus. He reported that good results with weed control in corn had been obtained through the use of substituted urea herbicides and that a number of other new products will bear further experimentation.

Results of experiments on other crops and different weed pests were also reviewed. Canada thistle was controlled quite well by applications of 3-amino-1,2,4-triazole. "So far, we have not eradicated Canada thistle with one application, but we have come close to it at times," he said. At other times, however, the control attempt completely failed. "Further experiments are needed before we can make accurate recommendations," he explained.

The speaker described to his listeners the best method of application. "Spray about April 25 to May 10, when the thistles are about 6 in. high," he advised. "Leave them at least two and preferably three weeks and then plow and plant corn. Not only in Ohio, but in Indiana and Illinois, this technique controlled 90 to 95% of the thistles with no in-

(Continued on page 18)

Preliminary Fertilizer Consumption in U.S., Year Ended June 30, 1955, with Comparisons

Region	Consumption*—1,000 tons: Mixtures	Materials†	Total	Per cent change from 1953-54—Per cent: Mixtures	Materials	Total
New England	373	79	452	+6.0	+22.1	+ 8.5
Middle Atlantic	1,882	217	2,099	+2.4	— 6.0	+ 1.5
South Atlantic	4,922	1,149	6,071	—2.0	+ 2.5	+ 1.2
East North Central	3,371	1,031	4,402	—6.9	—14.2	— 8.7
West North Central	1,283	905	2,188	—4.5	+ 2.7	— 1.7
East South Central	1,983	910	2,893	—2.8	— 7.5	— 4.3
West South Central	704	659	1,363	—1.3	— 3.3	— 2.3
Mountain	54	339	393	—3.3	+ 0.7	+ 0.1
Pacific	297	1,897	2,194	+8.9	+18.4	+17.0
Continental U.S.	14,869	7,186	22,055	—2.6	+ 1.2	— 1.4
Territories	282	131	413	—0.4	+ 1.7	+ 0.2
Total: 1954-55	15,151	‡7,317	22,468	—2.5	+ 1.2	— 1.3
1953-54	15,541	‡7,232	22,773	0.0	0.0	0.0
1952-53	15,722	‡7,690	23,413	+1.2	+ 6.3	+ 2.8

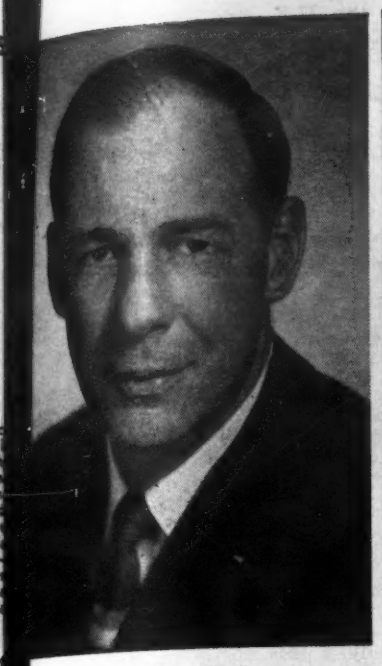
*Includes fertilizers distributed by government agencies. †Includes: Ground phosphate rock and colloidal phosphate, basic slag, secondary and trace element materials, such as borax, metallic salts, sulfur, gypsum, etc., used as separate materials. Does not include liming materials or the quantity of materials used for manufacture of commercial mixtures. ‡Materials not guaranteed to contain N, P_2O_5, or K_2O included in 1954-55 total, 785,000 tons; 615,513 tons in 1953-54; and 877,487 tons in 1952-53. New England—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; Middle Atlantic—New York, New Jersey, Pennsylvania, Delaware, District of Columbia, Maryland, West Virginia; South Atlantic—Virginia, North and South Carolina, Georgia, Florida; East North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin; West North Central—Minnesota, Iowa, Missouri, North and South Dakota, Nebraska, Kansas; East South Central—Kentucky, Tennessee, Alabama, Mississippi; West South Central—Arkansas, Louisiana, Oklahoma, Texas; Mountain—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada; Pacific—Washington, Oregon, California; Territories—Hawaii, Puerto Rico, Alaska.

Estimated Content of Primary Plant Nutrients in All Fertilizers Consumed in U.S., Year Ended June 30, 1955, with Comparisons

	Quantity—1,000 tons: N	Available P_2O_5*	K_2O	Total	Per cent change from 1953-54—Per cent: N	Available P_2O_5	K_2O	Total
New England	29	48	47	124	+15.9	+13.9	+ 9.3	+12
Middle Atlantic	123	230	195	548	+11.5	— 1.6	+ 6.1	+ 3
South Atlantic	398	472	485	1,355	+ 4.1	— 4.0	+ 4.8	+ 1
East North Central	282	539	576	1,397	+ 8.1	— 1.5	— 3.0	— 0
West North Central	298	355	162	815	+12.0	+ 4.8	+ 4.7	+ 7
East South Central	271	254	213	738	+ 2.9	— 6.7	— 0.6	— 1
West South Central	192	152	82	426	+ 5.8	+ 5.0	— 3.3	+ 3
Mountain	68	57	3	128	+ 3.6	— 3.2	+28.3	+ 0
Pacific	265	101	31	397	+12.8	+.9.5	+12.8	+11
Continental U.S.	1,926	2,208	1,794	5,928	+ 7.6	— 0.6	+ 1.5	+ 2
Territories	58	20	41	119	+ 0.9	— 0.7	+ 3.3	+ 1
Total: 1954-55	1,984	2,228	1,835	6,047	+ 7.4	— 0.6	+ 1.6	+ 2
1953-54	1,848	2,242	1,806	5,896	0.0	0.0	0.0	0
1952-53	1,637	2,271	1,738	5,646	—11.4	+ 1.3	— 3.8	— 4

*Includes, as available P_2O_5, 2% of the colloidal phosphate and 3% of the phosphate rock marketed for direct application.

FERTILIZER CONSUMPTION—Commercial fertilizer use by regions for the year ended last June 30 is shown in the tables above. The tables are from the preliminary fertilizer consumption report released recently by the U.S. Department of Agriculture. According to the report, fertilizer use in 1954-55 totaled 22,468,000 tons, a decrease of 1.3% from a year earlier. However, the estimated quantity of primary plant nutrients in fertilizer consumed was 6,047,000 tons in 1954-55, an increase of 2.6% over the 1953-54 figure. The complete preliminary report appears on page 1 of the Jan. 2 issue of Croplife.



J. Newton Hall

Newton Hall med to Post With n Mathieson

ALTIMORE—J. Newton Hall has n named western manager of the ecticides Division of Olin Mathie- Chemical Corp., it has been an- nced by Robert Zipse, general nager. Mr. Hall's headquarters will n Denver.

r. Hall is a former sales vice sident of Julius Hyman & Co., ver, and from 1952 until he joined Mathieson, he was president of neer Chemical Associates, Inc., of ver. During World War II, he ed for three years in the chemi- division of the War Production rd.

r. Hall is a member of the Chem- Club of New York, the Sales- 's Association of the American mical Industry, and the Denver ss Club. He is a native of New ey and a graduate of Rutgers versity.

p-Dressing Boosts falfa Yields More an Ton an Acre

ADISON, WIS.—Top-dressing al- a fields boosted hay yields by more n a ton per acre on 88 demonstra- fields around Wisconsin last mer.

. J. Chapman, University of Wis- sin soils specialist, reports that ra fertilizer applications on old lfa fields—averaging $8.16 in cost each acre—resulted in an increase ,322 lb. of hay per acre.

ost fertilizers used in these dem- trations were high in potash con- , such as 0-10-30B or 0-12-36. lication rates went up to 500 lb. acre in many cases.

This was in spite of an especially summer, and the top-dressing s done in the spring. Dr. Chap- n says results would have been en better if the fields had been -dressed in fall, 1954.

op-dressing paid off in lighter s as well as in other areas, ac- ing to Dr. Chapman. On the Roy lough and Sons farms near Ma- anie, top-dressing has brought tantly increased yields since fall, . Top-dressed fields there have raged 10,500 lb. per acre over a e-year period, compared to 4,500 n portions of the same fields that not top-dressed. Hay yields in- sed by 1,500 lb. per acre there summer, on top-dressed fields.

PINE BEETLE LOSS

NOXVILLE—The southern pine e has killed an estimated 50 on board feet of pine timber in ern North Carolina and eastern essee during the past three , according to the University of essee.

Monsanto to Build Headquarters Building, Research Laboratory

ST. LOUIS — Monsanto Chemical Co. plans to construct a group of general headquarters buildings in a campus-like setting on a tract of land owned by the company at Lindbergh and Olive Streets in St. Louis County, it was announced recently.

Construction will start as soon as possible. It is anticipated that facilities will be ready for occupancy by late 1957. Plans call for three almost identical office buildings, an executive building, and a utility building. The three principal office buildings will each contain three floors. Approximately 300,000 sq. ft. of floor space will be provided.

The buildings will be grouped to make the most effective use of the rolling terrain on the 252-acre tract. Landscaping and planting, utilization of existing wooded areas, and attractively planned roads and walks will be included in the project. No manufacturing facilities are ever contemplated at the site.

Construction will be started at the same time on a laboratory building at the Creve Coeur location for the research department of the company's Inorganic Chemicals Division. The research center will permit centralization of personnel and activities now located at Dayton, Ohio, and Everett, Mass.

Monsanto now operates two large manufacturing plants in the city of St. Louis, one at 1700 South Second St. and one at 8201 Idaho Ave., which covers more than 18 city blocks, including parking areas.

Monsanto intends to continue its expansion program at those two locations in the city of St. Louis. The erection of its new office building in St. Louis County should not be construed as moving away from St. Louis, but rather as an expansion in the metropolitan St. Louis area, the company stated.

R. B. Fuller Named Special Consultant by International Minerals

CHICAGO—R. B. Fuller of Mulberry, Fla., has been appointed special consultant to the Phosphate Minerals Division of International Minerals & Chemical Corp., according to an announcement by George W. Moyers, vice president in charge of the division.

Mr. Fuller has been associated with International nearly 30 years and since March, 1953, has been assistant to the vice president in charge of the Phosphate Minerals Division. Previously he was manager of the corporation's Florida Phosphate Department.

In 1951 Mr. Fuller received an honorary degree as doctor of laws from Florida Southern College for his contributions to the growth of the phosphate industry in Florida and for his participation and leadership in civic, educational and charitable affairs.

WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

The dependence of Europe on Morocco for phosphate rock is such that if there were any breakdown in supplies for more than a few weeks there could be a major crisis in the fertilizer industry over a large part of the world.

The recent civil disturbances in Morocco have caused traders to do some thinking about the problem. Phosphate rock is plentiful throughout the world, but it is not immediately available.

Mines in the U.S. and elsewhere could not be developed sufficiently to provide for the requirements of Europe in less than one or two years, according to one trader, and during that period a serious situation would undoubtedly prevail.

Latest reports from Morocco say that the mines are still in production though some damage was caused during the rioting. Management dealt with the situation energetically, and at no time have supplies been held up. Some users are already building up their reserve stocks because further trouble in Morocco may cause a more serious dislocation.

In any event, the prevailing shortage of shipping space has held up deliveries in the past few months and stocks are being built up against the possibility that this shortage may continue.

The danger to the mines has highlighted the more permanent problem which resolves itself into one of certainty that Moroccan sources cannot meet any further increases in demand, even under the most peaceful conditions. Production capacity is already stretched at the previous level of demand. Accordingly, the European trade is looking for alternative sources.

Pacific Supplies

Coming in for serious examination is the possibility of increasing production in Nauru and the Ocean Islands in the Pacific. Operations there are a joint venture of the British, Australians and New Zealanders but the U.K. has never drawn its quota. A breakdown in Moro would see the British calling forw their entitlement and this, in t would leave both Australia and N Zealand short of phosphate.

Recently, representatives of three governments met in London discuss the possibility of organiz a substantial expansion of producti in the islands. It is hoped to sec an agreement under which increas amounts of phosphate rock will taken out each year.

Belgian Plans

Nitrogenous fertilizer production growing steadily in Belgium, plans are being made to modern the industry with a view to slash production costs.

A leader in the field is the Un Chimique Belge and the compan Zandvoorde plant is being revamp so that fertilizers can be produc by a less costly process. Others following this example.

Total production by the Belgi industry in terms of nitrogen co tent rose from 166,000 metric to in 1950-51 to 235,000 tons in 195 54, and it is understood that th total was topped in the year ende July 1, 1955.

Ammonium sulfate comprises o 60% of the production, the remain being ammonium nitrate and calciu cyanide. Ammonium sulfate ran first in the export field with F Eastern countries taking most of t availability. Holland and France a the biggest customers for ammoniu nitrate.

U.K. Officials

A. J. Kent, A. W. Kent, Lond has been elected president of the A sociation of British Organic Fertil ers, Ltd. A. G. Ray, George Mon Ltd., is vice president, with G. Colsell, Shaw Scott & Co., Ltd., treasurer.

Indian Policy

The Indian government has decid that wherever possible ammonia sy thesis plants will be associated wi all new steel plants.

Revealing this policy, D. P. Ka marker, minister of commerce, sa that the government proposes establish a fertilizer plant as an a junct to the steel works at Rourkel

Dorr-Oliver, E. Long Combine Canadian Operations

STAMFORD, CONN.—J. D. Hitc Jr., president of Dorr-Oliver, In Stamford, Conn., has announced plan for the integration of the Canadia operations of Dorr-Oliver with thos of E. Long, Ltd., Orillia, Ontario. Th new organization will be known a Dorr-Oliver-Long Limited.

Clarence R. Long, presently a di rector of Dorr-Oliver, Inc., and pre ident of E. Long, Ltd., will be th president of the enlarged organiz tion. Headquarters will be located i Orillia with the former Toronto offic of Dorr-Oliver and the Vancouve office of E. Long operating as di visional sales offices.

Dorr-Oliver supplies a broad lin of equipment and engineering service to the metallurgical, chemical, in dustrial and sanitational field throughout the world. Its offices, sub sidiary companies, representatives o resident engineers cover the U.S. Europe, Africa, Central and Sout America, East and West Indies, Au tralia, India, Japan, Hawaii and th Philippines. Direct manufacturing fa cilities are located at Hazleton, Pa Oakland, Cal., and Denver, Colo., an manufacturing arrangements ar maintained with concerns in variou countries abroad to produce th equipment engineered and sold by it worldwide technical staff.

Special Retail Section

Better Selling

Richer Fields for Dealers

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

Iowa Firm Has Complete Merchandising Plan Featuring Winter Fertilization

By AL. P. NELSON
Croplife Special Writer

Last spring, the Simonsen Mill endering Plant, Quimby, Iowa, had bulk spreaders operating in a wide rritory in this area of the country, d in the fall of 1954, the company d 18 bulk spreaders operating. rom the number of spreaders oper- ing in both fall and spring, it can seen that the company has been nusually successful in selling farm- s on the idea of buying and spread- g fertilizer in the fall months.

Some of the men who handle the preading work are virtually in busi- ess for themselves in areas they epresent. They get a commission on heir work, and they also do selling nd collecting. The Simonsen plant Quimby, where fertilizer is also anufactured, has its own truck aintenance shop.

It has been discovered, after sev- al years of extensive fertilizer preading in the area, that this type work is hard on trucks and bodies nd careful maintenance is needed to eep trucks operating efficiently, and lowest possible cost.

It was the labor of keeping trucks nd bodies operating properly in all ypes of weather, that led the Simon- ens into the body manufacturing eld, which is now a separate division the business.

During the first nine months of 1955, this fertilizer firm had sold nd spread 5,994 tons of fertilizer, n a total of 44,969 acres. This com- pares with a 12 month total in 1954 f 66,498 acres and 9,349 tons, for n average of 282 lb. per acre. In 1953, the firm spread on 39,127 cres with a total tonnage of 5,457.

Officials feel that 1955 totals may ot exceed 1954, the latter a record ear. Drouth has affected the Iowa rea in 1955 and had some effect in utting down fertilizer purchases in ome areas. Lower prices on some arm products, especially hogs, have ad some effect on the fertilizer sales this region.

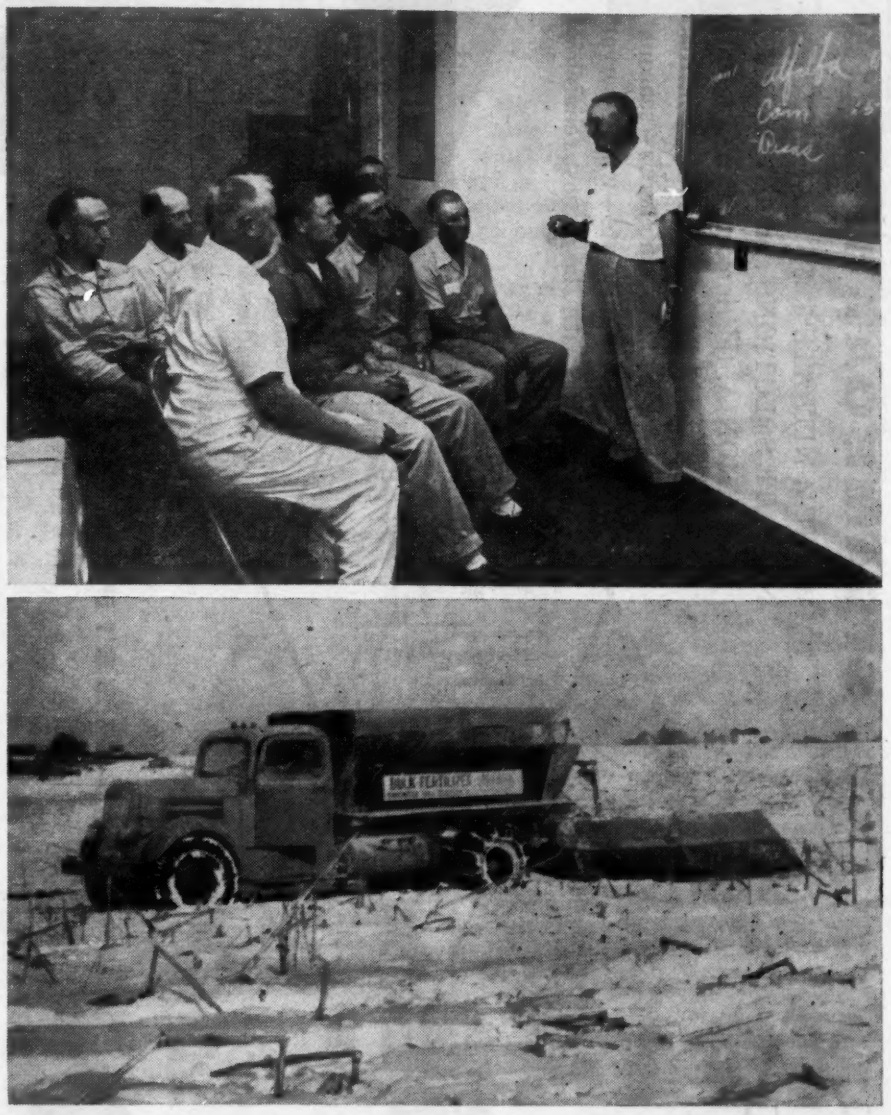
One of the remarkable features bout this booming business enter- rise—the company also manufac- ures and sells feed, manufactures odies for bulk fertilizer spreaders nd bodies for bulk feed trucks, and perates a rendering plant and fer- lizer plant — is that for several ears, the management has been able o do a large share of its fertilizer elling and spreading during the inter season.

In fact, a lot of the advertising one by the company during fall and inter months plays up the fact that 's a good idea to have fertilizer pread in the winter, when snow is n the ground.

So successful has this campaign een that Simonsen trucks regularly pread fertilizer in December and anuary, two tough months from a old and snow standpoint in northwest wa. In fact, the Simonsens say that ey can spread fertilizer even with in. of snow on the ground. With e ground hard and frozen, there less danger of sinking in, as in ringtime, and spreading costs usual- are lower.

The only exception from a weather ndpoint, is when a farmer wants

(Continued on page 12)



IOWA FIRM — Vernon D. Petree, who is in charge of the soil laboratory for Simonsen Mill Rendering Plant, Quimby, Iowa, is shown in the top photo talking about soil fertility at one of the firm's driver training sessions. The lower photo shows winter spreading by one of the firm's trucks. Simonsen officials say that spreading can be done in up to 10 inches of snow.

SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

"How to Go Broke in the Anhydrous Ammonia Business" is the title of an amusing yet thought-provoking article by S. C. Smith, the Smith Co., Uvalde, Texas, in the recent issue of Agricultural Ammonia News.

Except for perhaps two "don'ts", Mr. Smith's business "guides" could apply to any fertilizer and farm chemicals dealer.

Mr. Smith's 12 pointers, he claims, are not exactly foolproof but should yield results 99 times out of 100. Any combination of two, he says, will almost surely put a dealer out of business. Here are Mr. Smith's 12 rules for going broke:

1. Never take a soil sample. If the customer already has a soil test, tell him to ignore it. Also advise the customer not to use phosphate or potash because all he needs is lots of anhydrous ammonia and money for lime is wasteful.

2. Always have some part of the equipment leaking. The customer then will know he is getting anhydrous ammonia and not formaldehyde or something else. If difficulty is encountered here, simply "crack" the 100% gauge and "booger" the threads so it can't be closed off.

3. Always keep your supplier guessing. After all you are the buyer. If you figure you will need 10 cars for the month following tell him either one car or 20 cars.

4. Use fancy and elaborate discount terms, and by all means use different terms to several customers in the same area. In connection with

(Continued on page 16)

Boxcar Shortage May Snag Spring Fertilizer Delivery

CHICAGO—The serious shortage of freight cars could become so severe in the months immediately preceding spring that fertilizer producers might not be able to move raw materials in needed volume from phosphate and potash mines to factories, the Middle West Soil Improvement committee points out.

That in turn could mean localized shortages of fertilizer at the moment farmers need it most.

The car shortage exceeded 20,000 at times last fall, says the committee, while carloading totals were soaring. It is tapering off seasonally now in the early winter months as the strain on rail freight facilities eases somewhat.

This winter breathing spell should give fertilizer manufacturers their best chance to get materials from the mines in uninterrupted volume. Then if delivery of finished fertilizer is maintained in the weeks ahead to dealers and farms, factory production schedules can be kept high enough to meet spring needs.

Transportation specialists report that the freight problem is complicated by a steel shortage hampering production and delivery of new cars to the railroads, the committee says. Some car builders are reported down to ¼ to ½ of production capacity.

While the railroads' backlog of orders for new freight cars is expected to reach 140,000 early in 1956, says the committee, it is estimated that deliveries of cars will probably extend into 1957. Meanwhile, thousands of disabled cars are sidelined on repair tracks and the scrapping of old cars goes on at a high rate.

Corn Borers Cause $10 Million Loss To 1955 Indiana Crop

LAFAYETTE, IND. — Corn borers caused an estimated loss of $10,303,200 to the 1955 Indiana corn crop, M. Curtis Wilson, Purdue University entomologist has reported.

He based this figure on a two percent loss for each borer per stalk. Through such a calculation, he estimated that 9,540,000 bu. of corn were destroyed by the borers. This figure is 3% of the Indiana corn yield.

A survey conducted by Mr. Wilson and the other Purdue entomologists revealed that only moderate to light infestations of the first brood occurred in 1955. However, conditions favored a high survival of the second brood which caused most of the damage.

POINT FOUR ASSIGNMENT

OKLAHOMA CITY — Dr. H. F. "Pat" Murphy, who has been on the staff of the Oklahoma A&M college faculty for 36 years, and head of the agronomy department since 1940 has left for Ethiopia where he will join the Point Four-sponsored Imperial Ethiopian Agricultural College project as head of soils science work. His work will entail a survey to determine the productivity of Ethiopian soils; teaching in the Ethiopian Agricultural school and conducting research.

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Doing Business With Oscar & Pat

When plump Tillie Mason came to work that cold January morning her cheeks were red and her blue eyes shown brightly. As she opened and closed the door to the salesroom, a couple of bells, still up from Christmas, tinkled merrily.

"Oh, I like those bells," Tillie said, taking off her gloves.

"Well, I don't," Oscar Schoenfeld, the balding partner in the farm supply firm of Schoenfeld & McGillicuddy, said sharply. "If you ask me, people overdid this Christmas thing. It's a lot of foolish expense."

Some of Tillie's cheerful feeling seemed to evaporate. She sighed, went to her desk and slowly took the cover off her typewriter. Oscar sure was tight, even during Christmas season.

The mailman came in. In addition to depositing a stack of first class mail which Oscar quickly held up one after the other to his desk lamp to see if there were checks inside, the mailman deposited a big parcel post bundle on the desk. "Sure is cold," he said, wiping his red nose with a mittened hand as he prepared to leave. "Often wish in winter I had a nice, easy inside job like you people, soaking up lots of heat all day long."

Oscar looked up coldly, disapprovingly. "That's what you think!" he said sarcastically. "You should be around this joint for a whole day sometimes, and you would want to get out and stay out." Then he turned to the letters.

The postman looked at Tillie, made a grimace, shrugged his shoulders and hurried outdoors. Now Oscar turned his attention to the big parcel post bundle. He looked at it critically, then asked gruffly:

"What's this? A bundle from Croplife! We get one paper from them every week. That's enough."

"I dunno," Tillie said quickly. "Why not open it?"

Like a schoolteacher preparing to punish a child, Oscar took a knife and with tight lips cut the twine around the package. He ripped off the paper.

"Huh!" he snorted. "Bug of the Week reprint booklets! Must be some of Pat's work. He's not satisfied with one reprint—no—he has to get a whole bunch of them, Must be, must be 50 or 75 here." He strode back and forth, his face getting flushed with anger.

"That's Pat for you every time!" he complained. "Always ordering something. Always ordering too much. Always ordering something we could get along without. Ach Himmel!" he slapped his hand agonizingly against his perspiring forehead. "Must it always be like this? How can I stand it? How can the bank account stand it?"

"B—but," put in Tillie timidly, sucking the last of an ulcer powder, "maybe Pat has a use for them. Farmers are interested in that Bug of the Week series. Remember last summer how they looked at the sheets Pat posted up?"

"Well, what happened to those old sheets?" Oscar came back quickly. "Why didn't he save those and use them this year? Then he wouldn't have to buy this big stack. They cost about 25¢ each for these booklets. That—that must make $15 or $20 for this big stack. Ach—"

He broke off because just at this moment Pat came walking in, unbuttoning his grey stormcoat and removing his grey felt hat.

"What's this?" asked Oscar tartly, pointing at the package. "Are Croplife printing presses running overtime to send us all these?"

Pat smiled, his blue eyes bright. "Oh, they came, eh? Good."

"You're at it again," Oscar said. "Can't you ever cut down on expenses?"

"Oh, I've got good use for all those reprints, Oscar," smiled Pat. "You watch, they will sell lots of pesticides for us next spring and summer."

"Huh, I don't care about sales next summer—yet!" Oscar snapped. "What I want is sales—now—and low expenses for the month."

"I had to buy them now," Pat said. "The ag teacher asked me to."

"Since when has the ag teacher got stock in this business?"

Pat grinned patiently. "Oscar, Oscar, let me explain. The ag teacher is going to give some talks on entomology in his classes. And he knows about the Bug of the Week series. He wants to give a booklet to each of his students in the classes, so they can see what

(Continued on page 16)

IOWA DEALER

(Continued from page 9)

fertilizer spread on plowed, frozen ground. This is tough on equipment and the truck driver. The Simonsens usually advise a farmer to have fertilizer spread in the fall before plowing, or on unplowed ground in winter for spring plowing. They always stress that fertilizer absorption on snow covered ground has been proved effective in many, many instances.

The firm's sales records back up their contention that winter is a good time to have fertilizer spread. For example in Dec., 1954, the firm spread 844 tons on 6,026 acres, which was 9.02% of the company's fertilizer sales that year. In January of 1954 the firm spread 4,779 acres, using 634 tons, or 6.7% of the year's business.

Further records show that in the first six months of 1954 the firm spread 38,246 acres, while 28,252 acres were spread in the last six months of the year. The heaviest month of 1954 was April when 15,542 acres were spread for a total of 21.6% of the year's business.

However, the fertilizer spread percentages from September until March 1 totaled 60.1% of the business, for a 12 month period. November, 1954, accounted for 20.1% of the year's business, indicating heavy fall fertilizing. Complete percentage figures for 1955 have not yet been compiled.

The Simonsen enterprise is strictly a family affair. Believe it or not it is a seven way partnership. There are four brothers in the company as senior partners, and three of them are veterinarians. These brothers are Dr. W. E. Simonsen, Dr. R. E. Simonsen, Dr. O. K. Simonsen, and Alton P. Simonsen.

Three other partners are Dr. E. Dean Simonsen, Dr. Doyle W. Simonsen and Merle W. Simonsen. These latter three are brothers, and are sons of Dr. W. E. Simonsen. Dean and Doyle are also veterinary graduates, while Merle W. is the engineer of the family. He has charge of the firm's new fertilizer production plant.

Dr. E. Dean Simonsen has charge of advertising and public relations for the firm, while Dr. Doyle W. Simonsen has charge of production and sales. Thus it can be seen that the younger men are beginning to shoulder much of the work of the widespread organization.

The company started in business as a rendering plant, and still conducts this business. There are stations throughout the area where agents not only solicit dead animals, but take orders for fertilizer and feeds for the Simonsen organization on a commission basis. The present, well developed company, is a natural expansion of farm needs in the area, and the firm's sales territory seems to be expanding each year.

Practically every phase of the company's operation has been studied by one of the Simonsens, the results analyzed and recommendations made for better operation. Take in the field of driver training, for instance.

In the winter season, schools are held for drivers to teach them how to operate their trucks, how to sell, how to service and collect and build good customer relations. The Simonsens even provide each driver with a booklet entitled "Can You Really Drive a Truck?" This booklet contains valuable information and diagrams about the trucks and their operation. The Simonsens lecture to truck drivers at these training schools, illustrating the talks with diagrams, pictures, etc. It has been found that this type of careful instruction, followed by a question and answer period, has helped to cut down the cost of truck maintenance.

There is a bit of terse advice at the back of the truck driving booklet which says, "The information presented in this booklet can be briefly summarized: by using your gears, tachometer, and vacuum gauge you will get there sooner, use less fuel and cause the least possible amount of wear on your truck. Can you think of any reason for not using them?"

Drivers are also taken to short courses and meetings at Iowa State College, Ames. They are well equipped to sell and spread fertilizer and care for the equipment.

Most of the fertilizer sold by the Simonsen firm has been in bulk. For bagged products they buy fertilizer at present, but the demand for bulk material is heaviest the year around.

When it comes to advertising, the firm has a large and thorough department which is extremely well organized. It is in charge of Dr. E. Dean Simonsen and is equipped with its own offset process printing equipment. One of the firm's colorful, informative folders which was printed recently is entitled "Fertilizer Service That Will Help You Get Better Results. Read inside about modern soil testing laboratory, insecticide-fertilizer mixtures, check plots, trained driver salesmen and yearly tonnage discount plan."

The well equipped soil laboratory is in charge of Vernon D. Petree, an experienced man. The truck drivers gather the soil samples, and the lab is able to test most of them within a two week period. There is no charge for this service, and it is much quicker than what the farmers could get from the excellent, but overworked state laboratory. The Simonsens invite their fertilizer customers to come to the lab and see how the soil testing is done, and many farmers do come. During the two years that the lab has been in operation samples from over 6,000 fields have been taken and tested for phosphate, potash and lime requirements.

The brochure telling about the lab informs farmers that the Simonsens have good equipment modeled after the Missouri County unit plan, but all testing procedures follow those of Iowa State College as nearly as possible.

The brochure also tells how Simonsen drivers are urged to get farmers to leave test strips in fields, as follows: one unfertilized, one with double the regular amount of fertilizer, and the rest of the field with a regular application. Many farmers are availing themselves of this opportunity to check the results of fertilizer application.

The publishing of pictures and data about various tests, one with aldrin in fertilizer, also helps to show farmers what services they can get from this fertilizer firm in a research capacity.

This past year the Simonsen firm has also put a new discount plan into operation. It allowed a $3 per ton discount on all fertilizer delivered by Jan. 7, 1956. In addition there is a tonnage discount on the total am of fertilizer purchased during calendar year. This quantity disc ranges from $2 to $6 per ton.

The monthly fertilizer maili which go out from the ad of every month of the year are t amazing. They average about 000 copies per month. Some of mailings are five and six she clipped together and sent to b holders over a wide area. So carry return postcards, especia when the firm wants farmers to quest drivers to take soil sampl Such cards also seek information what kind of crops the farmer pl to raise, etc.

The offset produced sheets are of pictures taken locally of spre trucks, farm crops, fertilizer appl tions, farm scenes, etc. There high news interest as well as vertising interest in many of pages.

In one sheet of a monthly bulle urging farmers to top dress hay l there was shown a picture of Alb Bruene, his granddaughter and monsen spreader man standing be a truck with hay samples grown the farm. Copy quoted Mr. Bru as saying, "I should have put twice as much. I would hate to that field if fertilizer hadn't b spread last February."

Testimonials like this, backed pictures, names and data help to c vince farmers that proper fertilizat of their soils will pay.

A special sheet in another bulle told farmers about the results using aldrin to cut down corn ro worm damage. Eight examples fr test plots were given to provide sa factory evidence that aldrin does when applied as directed in c fields. The bulletin stressed, too, th adding aldrin to a fertilizer m costs only $2.50 per acre.

For example, these pictures hav sometimes shown uneven applica tion on some fields, where waves grass and other crops were highe at one spot over another. In man cases, this could be traced back t some failure in the applicating pro cess. These pictures shown t drivers impress them with the im portance of doing applicating wor very carefully, so as to get uniform results.

In some instances, too, these pi tures have provided the stimulus f the Simonsens to study the spreadi attachments on the spreaders th are using. This study, charted car fully by Merle Simonsen, is very r vealing. Tests were conducted tim and again and rate of spread mea ured and weighed. Thus the Simo sens have come up with valuable ra of spread information which they no use in making their own spreade and in applying fertilizer. These tes are still continuing, as the evidenc builds up that a more regulate spread does a better job and satisfi the farmer.

The Simonsens also use a for of stationery which contains col pictures of corn in the various form of nitrogen, potash and phosphor deficiency, as well as its condition dry weather. "Plants Tell The Needs" says the heading of the pi tures.

With its new bulk plant in opera tion, the Simonsens feel that they ca expand their business and its scop of operations considerably and giv better service to the many farmer who come there for fertilizer an other supplies.

The new plant, built on the con tinuous TVA ammoniation plan, wa licensed by TVA and cost about $175 000. Its designed production capacit is 20 tons per hour.

FARM SERVICE DATA
Extension Station Reports

t is easier to maintain a pasture n to start one.

That's the statement of Ohio Exriment Station agronomists. These search men point out that half the ttle of getting profitable, high lding pasture or meadows lies in tablishing good stands.

The Ohio agronomists list three thods of getting a good legumess stand started: 1—Spring seed- in oats or without a companion p; 2—Spring seeding in winter eat or other winter grains; 3—mmer seeding after grains have en harvested.

Regardless of the method, it is imtant to add fertilizer on the basis experiment station recommendans and to apply lime if needed. gumes need large amounts of phosate and potash to establish healthy, n roots and to build thick, leafy growth.

★

Willard C. Kirk, 58, of Jefferson-le, Ohio, America's new corn king, orts that good seed plus a "putk" program of soil replenishment ped him win the crown for the rd time in five years at the Interional Grain and Hay Show held in icago in conjunction with the Inrnational Livestock Exposition.

Mr. Kirk, whose 335-acre farm in yette County, Ohio, produces hyd seed corn, soybeans, oats, Duroc s and Shropshire sheep, says that r steps were particularly impor- t in bringing him the champion- p:

. The use of high quality single ss hybrid seed; 2. Feeding the soil well-balanced supply of nitrogen, sphate and potash fertilizer, and ing regularly as needed; 3. A ro- ion that gives him a two-year lay- wn of legume-grass sod; 4. Re- ning manure and crop residues to soil.

The champion had 90 acres in corn s year, 70 in soybeans and 40 acres oats. The rest was in meadow. His n yields averaged 95 bushels per e.

★

A University of Minnesota exten- n soils specialist, Harold E. Jones, s that the lion's share of the fer- zer in Minnesota went on corn last r. The highest rate—206 lb. per e—was used on hay and cropland ture.

★

Chloro-IPC, a comparatively new d killer, is now recommended by chigan State University specialists use in controlling chickweed, Ger- n knotgrass, annual bluegrass and ep sorrell in strawberries.

Dr. Robert Carlson of the horticultural department at MSC said this terial has not shown the erratic racteristics found when regular C was used earlier for strawberry d control.

Dr. Carlson recommended that loro-IPC be used at the rate of pounds an acre or two quarts the 43% liquid solution in just ugh water to wet the foliage. In volume weed sprayers, he advised ng up to 100 gal. water an acre. a high pressure orchard sprayer used, low pressure and fan-type zles should be used. According to Carlson, temperature conditions time of spraying Chloro-IPC are important. Best results are obed, however, when the CIPC is put on in late October or early November.

★

Michigan farmers must fumigate their soil to win their struggle against nematodes, says John Knierim, entomologist at Michigan State University.

These plant parasites, he reports, are drastically reducing Michigan crop yields each year, but farmers are becoming more aware of the damage being done.

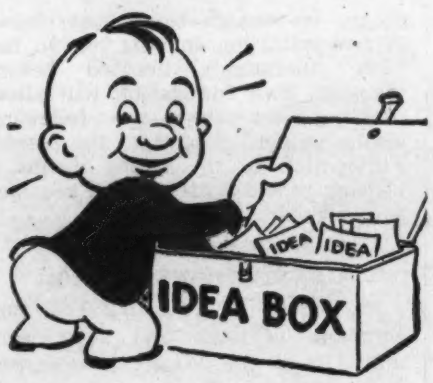
Small knots or galls which look like "beads on a string" appear on the roots as a result of nematode damage. These knots reduce the amount of water and nutrients the roots will pass into the plant.

Fumigation of the soil shows much promise for nematode control, says Knierim. Two chemicals have given good control in most cases, the MSU scientist states. They are D-D (Dichloropropane-Dichloropropene) and EDB (ethylene dibromide). Both are very volatile and must be applied by direct injection into the soil. Mr. Knierim recommends that tooth or chisel type applicators be used to inject the fumigant into the soil. The chemical then should be sealed in with a cultipacker or some similar tool to prevent loss by aeration.

Both D-D and EDB are toxic to plants, so enough time must elapse after application for the soil to become thoroughly aerated before planting. Fall fumigation will allow planting any time the following spring without danger to the plants. Fumigation in the spring means a waiting period until the soil becomes safe for planting.

CANNER CONFERENCE

MADISON—More than 250 canning company fieldmen and supervisors will attend the Wisconsin Canners Assn. 1956 Raw Products Conference Feb. 8-9 on the University of Wisconsin campus. Discussion topics will include dalapon for quack grass control, MCP for weed control in peas, insecticide persistence in soils and insecticides for corn borer and ear worm control.



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6360—Catalog

The new equipment catalog of Schelm Brothers, Inc., has been published and is now available. Schelm manufactures nitrogen equipment. There is no obligation in securing the catalog. Check No. 6360 on the coupon and mail it to Croplife.

No. 6361—Soil Drench

A new product for the control of damping-off is being marketed by Panogen, Inc., an affiliate of the Morton Salt Co. The new product is a liquid chemical soil drench called Pano-drench, developed as a means for controlling damping-off and other soil-dwelling fungus diseases. The product is used in a dilution of one teaspoonful to 3 gal. water and is applied to the soil before planting by drenching the flat or flower pots thoroughly. Since no drying or leaching is necessary, seeding can begin within 24 hours after treatment of soil, the company states. The product is available in 1 oz., 4 oz., and 16 oz. bottles. One 4 oz. bottle makes 72 gal. of drench and treats approximately 150 to 200 flats of 2½ sq. ft. size, it is claimed. Secure more complete details by checking No. 6361 on the coupon and mailing it to Croplife.

No. 6359—Fertilizer Mixer

Plant Foods, Inc., has announced its Chief mixing and blending unit for manufacturing of mixed fertilizers. The mixing unit is complete with push button control and incorporates many special features for economical plant installation and operation, the company claims. Production of the blender is being handled in cooperation with the Henderson Manufacturing Co., which also manufactures spreader bodies, bulk transport trucks and other allied equipment. Secure more complete details by checking No. 6359 on the coupon and mailing it to Croplife.

No. 5360—Feeder

The Omega Machine Co., division of B-I-F Industries, Inc., is manufacturing the Hi-Weigh, model 37, belt gravimetric feeder for continuously feeding dry materials at medium to high rates. This feeder, with a feature called Sens-A-Gram, has a super-sensitive controller which maintains accuracies well within + or — 1%, it is claimed. It offers built-in 100-1 variable speed transmission and a single power source with no auxiliary drives. Being introduced is a new line of gravimetric feeders of the loss-in-weight type for feeding a wide range of liquids and solids. Simplex and Duplex models are available in several sizes for feed rates from 1 lb./hr. to 60,000 lb./hr. Equipped with a "built-in memory," the feeder, with an accuracy of + or — ½% by weight, is available with totalizer, indicator or recorder, the company states. Check No. 5360 on the coupon and mail it to secure more complete details.

Send me information on the items marked:

☐ No. 5309—Accounts Receivable	☐ No. 6355—Pesticide Catalog
☐ No. 5358—Feeders	☐ No. 6356—Corn Borer Bulletin
☐ No. 5360—Feeder	☐ No. 6357—Pulverizer Bulletin
☐ No. 5361—Scale Bulletin	☐ No. 6358—Bag Filling Machine
☐ No. 6351—Coating	☐ No. 6359—Fertilizer Mixture
☐ No. 6353—Rotary Tillers	☐ No. 6360—Catalog
☐ No. 6354—Fertilizer Spreader	☐ No. 6361—Soil Drench

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67,

Reader Service Dept. Minneapolis 1, Minn.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6356—Corn Borer Bulletin

The Mackwin Co. has issued a folder entitled, "More Effective Corn Borer Control — Mackodee Granules G-20." The folder describes the firm's granular DDT product. Sections are devoted to what customers have to say about the product, the development of field tests which were begun in 1953 and the diluent and DDT level of the product. The folder adds that Mackwin product was "the only granular DDT used on large scale commercial acreage during 1955." The folder and other information may be secured by checking No. 6356 on the coupon and mailing it to Croplife.

No. 5358—Feeders

"Application of Principles of Instrumentation to Liquid and Dry Feeders" is the title of an eight-page preprint of a paper by Paul A. Coffman and issued by Omega Machine Co., division of B-I-F Industries, Inc. This preprint contains 11 flow-parts diagrams, and is part one on "Controllers." Purpose of this paper is to provide a basic knowledge of the application of instrument principles to gravimetric feeders, especially the function of the controller in its various forms. For your free copy of Preprint B-I-F-M65 check No. 5358 on the coupon and mail it to Feedstuffs.

No. 6358—Bag Filling Machine

A new brochure on Kraft Bag Corporation's automatic open mouth bag filling machine, called by the trade name, Kraftpacker, has been prepared. The brochure is entitled "What You Want to Know About the Kraft Bag Corp. Automatic Open Mouth Bag Filling Machine." Two pages of the brochure are devoted to a question and answer method of presenting information. The brochure states that the unit will handle bag weights from 25 lb. to 200 lb. The back page is devoted to a diagram and text explaining how the machine works. Secure the brochure by checking No. 6358 on the coupon and mailing it to this publication.

No. 6357—Pulverizer Bulletin

The Pulva Corp. announces the availability of a new condensed bulletin No. 5510 describing the firm's line of high speed pulverizers. The firm's product, called by the trade name, Pulva-Sizer, is available in five sizes ranging from ¾ h.p. to 7½ h.p. The bulletin states that there is a "size and type to meet your requirements . . . for fine grinding, blending and dispersing, granulating, wet milling or close particle size control." A partial list of companies who are users of Pulva equipment is included. Secure the brochure by checking No. 6357 on the coupon and mailing it to Croplife.

No. 6351—Coating

A new folder has been prepared by Alfred Hague & Co., Inc., on its rubber base paint called by the trade name Rubalt 7-C Red Primer. The folder states that the product provides "metals, wood, concrete and other surfaces with long lasting protection against moisture, acids, alkalies, electrolysis, hydrolysis, salt water, sunlight, dirt and grease, mineral oils and alcohols." The product dries in one hour, goes over damp surfaces and can be applied by spray or roller, according to the folder. Directions for use are also included in the folder. Secure the folder by checking No. 6351 on the coupon and mailing it to Croplife.

No. 6355—Pesticide Catalog

The York Chemical Co., Inc., has published a catalog of its pesticides and has it available for distribution. The company manufactures the Certox line of pesticides. The products described in the catalog include insect, roach and fly sprays, wettable powders, rodenticides, insecticide dusting powder, roach and ant powder, and pyrethrum insecticide dusting powder. Also the company's line of termite killers and wood preservers is described. Included are shipping and packing information. Secure the catalog by checking No. 6355 on the coupon and mailing it to Croplife.

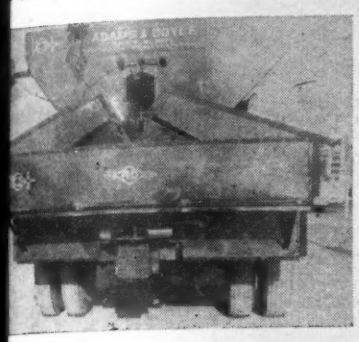
No. 5309—Accounts Receivable

"Simplified accounts receivable for retailers" (SARR) is described in an 8-page folder released by Remington Rand. Based on the company's "simplified unit invoice accounting plan" (SUIAP), "simplified accounts receivable for retailers" uses no accounting machines and requires no highly trained clerks. It is claimed to provide a complete, accurate and fast method of handling accounts receivable. The method uses Remington Rand's Kolect-A-Matic trays, housed in Safe-Ledger equipment for 24-hour protection from fire, and provides an accounts receivable ledger composed of open, unpaid items only, a monthly statement for each customer, and a history of each account.

ure literature on this method by cking No. 5309 on the coupon and ling it.

o. 6354—Fertilizer preader

new line of fertilizer, lime and sphate spreaders has been an- nced by Adams & Doyle, Inc. Ac- ding to the manufacturer the most ular features are: The exclusive cision built gear box with spiral rs; hardened steel shafting with -in. and 1¾-in. bearings; the solid gauge steel sheets used in the sides ends; the design that allows the



terial to be dropped directly into "eye" of the fan, permitting a re uniform and wider swath to be ead each time through the field. e feed gate can be set to spread formly from 100 lb. per acre up to r tons per acre. The spreaders are ilable in 7-ft., 8-ft., 10-ft. and ft. sizes. Complete information and wo-color brochure are available. eck No. 6354 on the coupon and il it to Croplife.

o. 6353—Rotary illers

The Midland Co., builder of garden ctors, announces that retail feed fertilizer dealers are eligible for lerships on its line of rotary ers and garden tractors. Coinci- t with this announcement is the roduction of a new Midland rotary er. The tiller takes a 16-in. tillage ath, has special tines of rugged, ged steel of the slicing, non-heeling e, designed to stay remarkably an, minimizing wrapping and wind- the company states. It is powered a Briggs & Stratton 2¾ h.p. air- led engine, equipped with recoil

ter and quiet muffler. The unit is to be exceptionally well-balanced, viding ease of operation and tilling iency usually found only in much e expensive equipment. Controls within easy reach of the operator. further information about the pment and dealerships, circle No. on the coupon and drop it in mail.

o. 5361—Scale lletin

new six-page, two-color bulletin cribing a versatile bulk weighing e for process weighing is offered Richardson Scale Co. Described is model E-50 scale which is elec- lly controlled and pneumatically ated. It is said to be completely matic in operation. It will weigh ly all dry, granular, small lumpy, crushed and powdered materials. The bulletin discusses the scale's construction, capacity, accuracy, and process weighing features. It describes such special features as a hopper door flapper, different inlet chutes, recording counter, accurate knife edge weigh beam and optional agitator and subsidiary beam equipment. For more complete details check No. 5361 on the coupon and mail it to this publication.

IRRIGATION FARMERS

COLLEGE STATION, TEXAS—According to a report just released by R. V. Thurmond, Texas, extension irrigation engineer, farmers in the High Plains area of Texas have installed, since 1948, a total of 9,618,062 ft. of concrete water pipe line on their farms and ranches.

Winter Wheat Seedings Up From Year Ago

WASHINGTON — Winter wheat seedings in the fall of 1955 are nearly 2% more than a year earlier but about a fifth less than the 10-year average, according to the U.S. Department of Agriculture. The crop seeded in the fall of 1955 is the third consecutive winter wheat crop planted under acreage allotments and marketing quotas.

Total seedings of winter wheat for all purposes this fall are estimated at 45.2 million acres, 0.8 million acres more than in the fall of 1954 and 9.7 million acres less than average.

Rye acreage sown for all purposes in the fall of 1955 is the second largest since 1943. The estimated 4.6 million acres sown is 8% less than the 5 million acres seeded in the fall of 1954 but nearly a third more than the 10-year average of 3.6 million acres.

Nematode Control Outlined at Meeting

IMLAY CITY, MICH.—The annual Muck Day program heard a Michigan State University specialist point out that "soil fumigation is the only sure death for nematodes" which are causing some trouble in the Lapeer muck lands.

Prof. John A. Kniermin, of the Michigan State University entomology department, also reminded the farmers that the soil fumigation procedure was not a permanent control, but must be repeated.

U.S. Farm Census Reports on Fertilizer Use

Details of commercial fertilizer and lime use are included in the preliminary state and county reports of the 1954 Census of Agriculture, released recently by the Bureau of the Census, U.S. Department of Commerce.

In the table below are the figures on fertilizer and lime consumption, including use on specific crops, for the states in Croplife's Midwest dealer area, to which the special regional circulation of this issue goes.

A chart for the southern states appeared on page 9 of the Jan. 2 issue of Croplife. Those for western and northeastern states will follow.

The Bureau of the Census points out that the figures in the preliminary reports are subject to revision. The production statistics are for the calendar year of 1954.

Similar statistical data from the 1954 census of agriculture is available for each of the 3,100 counties in the U.S. in the form of individual four-page leaflets. These county reports, along with the state reports, may be obtained from the Director, Bureau of the Census, Washington 25, D.C.

A charge of 10¢ is made for a single preliminary report, state or county. Charges for each of the complete state sets vary, depending upon the number of counties involved. A charge of $4 will be made for one complete U.S. set, including all counties and all states. A set of the 48 state reports may be obtained for $3.75. Payment should be included in the order.

In addition to the data on fertilizer and lime use, the preliminary reports include statistics on number of farms, farm characteristics, acreage in farms, value of land and buildings, uses of land, farm facilities and equipment, specified classes of livestock, specified crops harvested, and available comparative data from the 1950 census of agriculture.

	Illinois	Indiana	Iowa	Kansas	Michigan	Minnesota	Missouri	Nebraska	N. Dakota	Ohio	Oklahoma	S. Dakota	Wisconsin
COMMERCIAL FERTILIZER													
Dollars	58,429,502	60,149,200	46,959,092	18,629,344	32,903,249	23,272,154	44,831,945	21,526,500	4,521,302	52,012,430	7,126,333	3,217,413	25,860,163
Tons	1,054,247	1,047,698	614,810	226,464	568,212	317,178	674,702	218,018	54,263	973,770	126,331	38,756	433,544
Acres fertilized	7,922,523	8,079,056	7,043,313	3,862,239	4,541,314	4,189,423	6,128,986	2,985,087	1,680,744	6,673,775	1,975,774	554,344	3,872,170
LIME AND LIMING MATERIAL													
Tons	2,513,147	1,760,426	1,540,593	375,368	440,229	382,802	1,462,547	288,354	60	1,551,462	76,777	620	996,736
Dollars	8,681,211	5,275,321	4,632,684	1,109,140	1,562,761	1,000,309	4,397,249	1,280,119	166	6,472,626	280,237	2,562	3,021,417
Acres fertilized	1,123,116	888,310	728,745	187,047	225,014	197,257	675,776	159,954	140	841,247	62,222	991	515,151
CROP USE OF FERTILIZER													
Hay and cropland, pastured, tons	96,422	64,840	50,242	19,104	41,766	41,588	77,099	17,424	1,836	67,185	26,173	6,447	32,367
acres	408,867	473,221	467,570	247,481	327,464	403,496	542,646	198,764	38,135	444,509	293,916	85,173	250,904
Other pastures tons	14,561	12,055	5,761	4,161	4,757	2,902	21,567	4,960	407	17,651	8,774	678	5,573
acres	75,790	94,420	62,520	52,634	40,192	34,777	147,962	65,041	6,963	117,700	109,430	9,313	42,425
Corn tons	609,159	587,401	405,735	36,225	160,856	176,414	274,091	131,776	5,363	468,085	9,013	18,078	207,160
acres	5,207,391	4,452,012	4,838,327	564,114	1,558,083	2,205,673	2,585,782	1,833,442	133,418	3,330,604	111,814	259,920	2,079,758
Oats tons					109,466	36,537							125,528
acres					995,016	511,026							1,220,512
Wheat tons	132,378	158,724	3,754	107,337				23,430	20,752	224,154		1,558	
acres	1,082,689	1,188,709	45,736	1,990,366				393,599	767,681	1,547,474		32,134	
Cotton tons							40,851				12,671		
acres							322,304				208,754		
Fruits, vegetables, potatoes, etc. tons	18,780	20,568	2,643	1,341	70,027	17,404	3,826	1,077	5,295	36,541	3,014	543	39,088
acres	102,203	79,682	18,216	15,271	262,521	116,577	25,928	9,622	59,358	107,629	23,192	5,306	147,600
Other crops tons	173,930	195,226	143,528	57,047	176,142	47,414	252,408	38,327	20,595	150,381	65,851	11,300	21,820
acres	1,045,986	1,756,362	1,637,110	990,622	1,340,980	919,838	2,499,955	494,248	676,662	1,122,898	1,225,893	164,120	146,392

New Owners Plan To Expand Kansas Fertilizer Firm

WAMEGO, KANSAS — The Wamego Seed & Elevator Co., fertilizer establishment here, has been sold by John O. Ross, to the Peddicord Bros. The new owners plan to handle fertilizer and say they will expand the business.

Four brothers comprise the new ownership. They are extensive farmers, livestock feeders, and also operate the dehydrator plant at Belvue, Kansas, six miles east of Wamego.

Already experienced users of fertilizer on their acreage, and on their father's large farm east of here, the Peddicords plan to go all out in their campaign to sell more fertilizer in this area. They are setting up plans to sponsor fertilizer meetings.

R. L. Peddicord, manager of the Wamego concern, says that he will not wait around in the office for business to come in but will "go out to the farmers in person and sell the fertilizer then if I can." His theory is that this product can be sold more readily if the businessman goes direct to the farmer and talks to him right out in the field or in the farmer's yard.

Missouri Farmer Hits 196 Bu. Corn Yield

COLUMBIA, MO.—A corn yield of 196 bu. of ear corn an acre has been reported on a 30-acre field on the farm of J. W. Bennett near Bessville in Bollinger County, Mo. This passes all yield reports of recent years in southeast Missouri and is one of the highest yields ever reported in the state.

The yield was calculated on three plots in the field—each 1/100 of an acre.

Mr. Bennett planted the corn the first week in June. It was planted in 36-inch rows with an approximate stalk count of 17,400 stalks an acre.

The fertility program used by the Bollinger County farmer consisted of applying 350 lb. of actual plant food an acre. This included 150 lb. nitrogen, 100 lb. phosphate, and 100 lb. potash.

OSCAR & PAT

(Continued from page 11)

the bugs look like, their habits, and what will control them."

Oscar heaved a sigh of relief. "Oh, that's different. Why didn't you tell me? Well, when the bill for the reprints comes I'll send it to the high school."

"No, Oscar, we are paying for the reprints."

Oscar blinked hard. "We are! Ach, what kind of business is this? Our school taxes are so high now they almost reach the sky, because they say they have so much to buy. Why can't they also buy these reprints?"

"Because I didn't ask them to," explained Pat. "Every reprint booklet I give the ag teacher for his classes will be stamped 'compliments of Schoenfeld & McGillicuddy, farm chemicals' and that is good advertising for us. These kids will study the booklets, learn how to kill pests and go home and tell their fathers and mothers about it."

"But I still think the high school would have paid for the reprints if you had insisted on it," put in Oscar sharply. "You're too easy with people. You are—"

Pat swung quickly on his heel and grabbed his hat. "Tillie," he said. "I'm going across the street to get another cup of coffee, maybe two. I need it this morning. Whew!"

Kansas County Active In Weed Control

ELLIS, KANSAS—Farmers in Ellis County, Kansas, demonstrated their interest in their noxious weed problems in 1955, according to B. J. Schulte, county weed supervisor.

In Ellis County 305 farmers sprayed 10,281 acres of bindweed by using 10,356 lb. of 2,4-D acid. Besides this, 187 farmers in the county treated 654 small patches of bindweed by using 27,489 lb. of sodium chlorate. The county also treated part of the known bindweed on the county highway system by using 10,511 lb. of chlorate. The county also used 2,000 lb. of borates.

Horticulturist Sees Broadened Horizons for Vegetables in Michigan

EAST LANSING, MICH. — Four examples of pioneering in truck gardening in Michigan are lauded by Stanley Ries, extension horticulturist at Michigan State University.

The four crops proved this past year that here are new markets and greater chance for increased income. Michigan State is telling this story of broadened horizons for vegetables to point out to the farmers that these crops can be planted in place of the wheat and the corn which have been given allotments.

A large crop of sweet potatoes met with good success in Berrien County in the Southwestern part of Michigan . . . Central Michigan farmers are continuing to grow more and more asparagus . . . and many farmers in various parts of the state found great possibilities in producing cauliflower and broccoli for the early fall market, reports Mr. Ries.

Soybean Yields Sag In Corn-Bean Rotation

URBANA, ILL. — Soybean yields at the Illinois Experiment Station have shown a progressively higher advantage for a four-year rotation.

L. B. Miller, soil fertility specialist at the University of Illinois College of Agriculture, reports that, in a two-year corn-soybean rotation at the station fields here, bean yields during the past four years have averaged 17.4 bu. an acre without soil treatment and 20.4 bu. with treatment of lime, phosphate, potash and nitrogen.

Corresponding yields of soybeans in a four-year rotation of corn, soybeans, wheat and mixed hay have averaged 21.4 bu. an acre without treatment and 28.2 bu. with treatment.

This experiment began in 1947 on depleted brown silt loam soil. The plots are duplicated and randomized for accuracy. In 1947 the bean yields were slightly higher in the two-year rotation than in the four-year rotation. Since then the advantage has always been with the four-year system, and it has become progressively larger.

OVER THE COUNTER

(Continued from page 9)

this phase goes easy credit also. A customer shouldn't have to pay until the crop is sold and if he has bad luck wait a year or two for your money. Keep him going in the interim with more easy credit.

5. Believe every rumor you hear about the price schedule being offered by your competitor. Then cut your price way under to teach the so-and-so a good lesson.

6. In order to strengthen your prestige and increase your importance, keep every customer waiting a day or two, even if you have equipment standing idle. Who does he think he is anyway?

7. If you can find a customer with extra dry cloddy soil, or extra wet soil, sell him lots of ammonia. That's your business and he probably won't notice the evaporation loss anyway. Also look for crops nearing maturity and sell the owner a heavy side-dressing job. You will no doubt have your money before he wakes up.

8. Jump on new accounts real heavy before checking with retail merchants, banks, etc. This idea can move lots of ammonia at times.

9. Don't advertise or do any promotional work. Sneak around and let as few people as possible know what you are doing. Potential competition might think you had too good a thing and move in on you.

10. Never, no never, loan your competitor ammonia, equipment, or even talk to him. If you tell him how smart you are, he will then be as well informed as you. Of course he didn't know anything to start with.

11. Don't join either national or state organizations. Never go to a meeting anywhere.

12. If you should attend a state or national meeting don't register. This way you save money and draw more attention.

WEED & SEED MEETING

ST. PAUL—The week of Jan. 16-20 has been set for the annual Minnesota Weed and Seed Inspectors' Short Course at the University of Minnesota's Institute of Agriculture.

Fred C. Broadway

INS NATIONAL POTASH—Fred Broadway has become sales representative for National Potash Co. the southeastern states, according an announcement just made by illiam B. Porterfield, vice president d sales manager of the company, New York. Mr. Broadway will ke his headquarters in Montgomy, Ala.

aul A. Vogel o Head Commercial esearch for Shea

NEW YORK—Appointment of Paul Vogel as director of commercial search of the Shea Chemical Corp. s announced Jan. 3 by Vincent H. ea, president. Mr. Vogel will be ated at the New York office of the mpany.

He joins the Shea firm after under- king similar duties with Allied emical and Dye Corp. in New York. ce 1950, Mr. Vogel directed mar- t research activities for the Gen- l Chemical Division of that firm d more recently also acted as mar- t research director for the National iline Division. Prior to 1950, Mr. gel's experiences included manag- market research functions for the nhart Manufacturing Co., Hartford, nn., and sales analysis functions the Du Pont Co., Wilmington.

Stewart Eckers

MIS MANAGER—Stewart Eckers been appointed manager of the timore sales office of the Bemis Bag Co. Mr. Eckers will super- Bemis sales in the upper Chesa- ke Bay area. A native of Balti- e, Mr. Eckers presently makes his e in Towson, Md. He is a grad- e of Western Maryland College, joined Bemis following service in ld War II.

FARM PLAN

(Continued from page 1)

for other crops which do not have acreage allotments.

The second step would be a direct cash payment to farmers who remove land from production of field crops and turn it back to grass land or timber. This latter phase of the soil bank plan is along long range conservation lines and good land use economics steadily advocated by orthodox USDA economists. This phase of the program will cover the marginal and fringe land.

The first step in the soil bank would probably affect some of the better farmland of the nation and be designed to reduce the annual output of the three big worrisome surplus crops of wheat, corn and cotton. Rice later may be given some special treatment by Congress when it considers the farm measure.

The President also stated that he later would recommend individual commodity programs designed to eliminate surpluses and would have other plans to widen agricultural research, develop new markets and new uses for farm products.

Prior to release of the President's speech a top house Republican farm leader told Croplife that, unless the soil bank proposal on cash payment was of great magnitude he feared the plan might boomerang.

Top Republican farm leaders in Congress have expressed the opinion that it would take between one and two billion dollars annually for a period of three years to reduce production to a point where surplus disposal programs were able to reduce this obstacle.

Since the President in his state of the union message has placed first importance on his budget balancing plans for the next 18 months, it hardly seems probable that any soil bank plan running into the billions of dollars will be presented. This observation is further supported by the President's comment that part of the soil bank plan will be paid for by reimbursement in kind to farmers who take land out of production voluntarily.

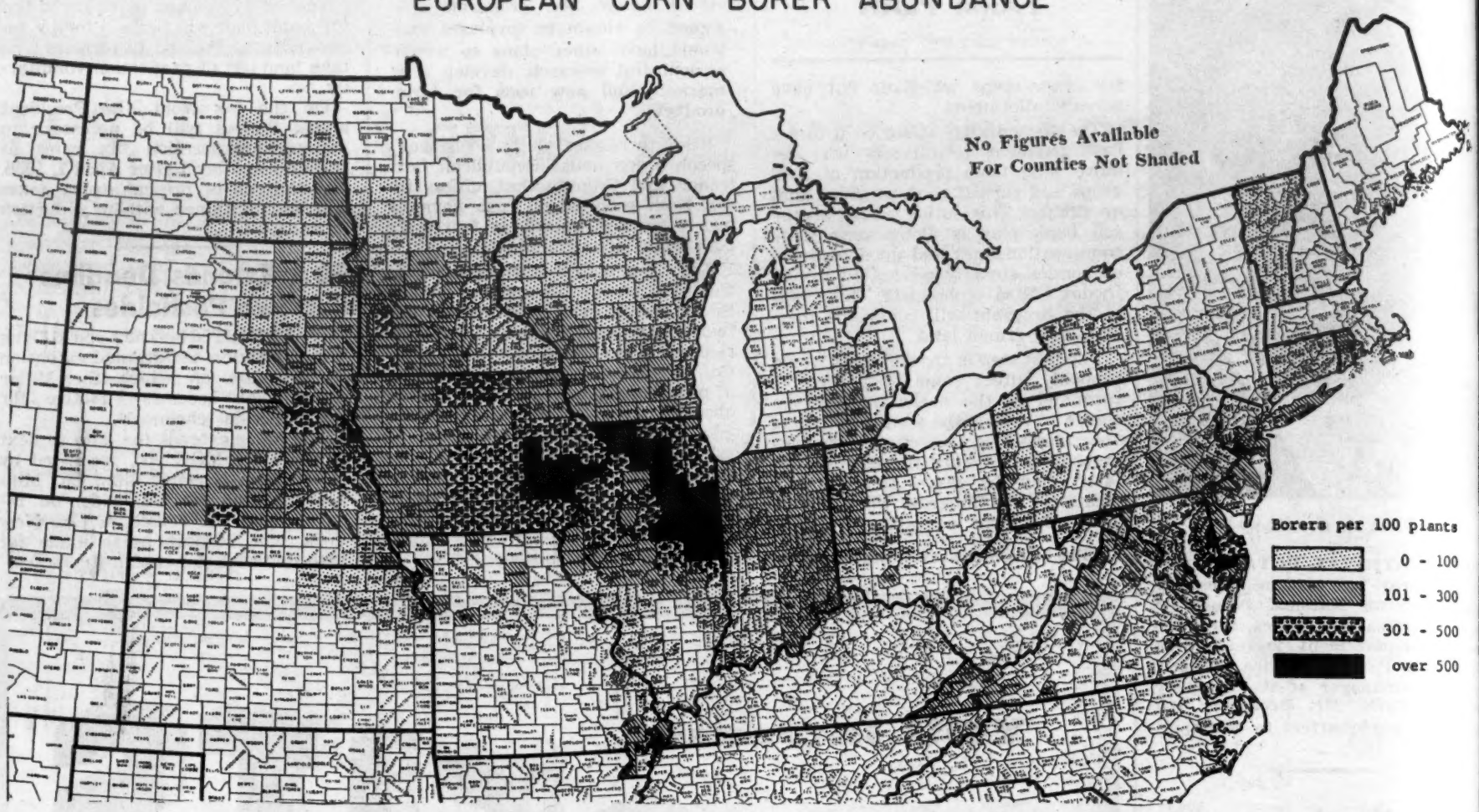
On the tax front, the President stated that it will be necessary to maintain corporation tax rates at their present level after April 1, 1956, and that all of present excise taxes will be maintained without reduction in rates.

FDA Extends Deadline For Two Pesticides

WASHINGTON—The Food & Drug Administration has granted extension of the date on which the Miller Amendment becomes effective for two pesticidal chemicals.

The order extends the date to next March 1 for MGK 264, requested by McLaughlin Gormley King Co., Minneapolis, and for Sulfoxide, on request by S. B. Penick & Co., New York. The requests were made for both materials for use in fly sprays.

EUROPEAN CORN BORER ABUNDANCE



CORN BORER SURVEY

(Continued from page 1)

Iowa and the Eastern Shore of Maryland may expect the largest areas of heavy infestation in 1956, the survey indicates. Large numbers of the borers were also found in small areas of South Dakota, Nebraska, Minnesota, Missouri, Ohio, New Jersey and Delaware.

Nationwide, the average number of borers decreased from 190 per 100 corn plants in 1954 to 164 per 100 in 1955.

In the East, populations increased from an average of 33 borers per 100 corn plants in 1954 to 90 in 1955. Nine of the eleven eastern states surveyed in the fall of 1955 showed increases in borer population.

Some of the more important increases were in Delaware, from 60 borers per 100 stalks in 1954 to 241 in 1955; Maryland, from 41 to 140; New Jersey, from 28 to 177; Rhode Island, from 39 to 131.

For 12 north central states, corn borer populations this fall average 183 borers per 100 plants as compared with 230 per 100 plants found in the fall of 1954. Only five of these states recorded increases over 1954—Illinois, Indiana, Minnesota, North Dakota and Wisconsin.

Illinois recorded an average of 225 borers per 100 stalks in 1954 and 339 in 1955. Increases from 102 to 172 were reported in Indiana, from 72 to 96 in Minnesota, from 37 to 47 in North Dakota, from 28 to 82 in Wisconsin.

The three states of the north central group having the highest averages in 1954 showed considerable decreases this year: Iowa dropped from 497 to 351, Nebraska from 353 to 186, South Dakota from 424 to 131.

Other states in this area showing slight to appreciable decreases were Kansas, Michigan, Missouri and Ohio. Persistent drouth was generally considered the principal cause for the decreasing borer population, USDA said.

The borer is now found in 1,644 counties in 37 states. Although no additional states were reported as harboring the pest in 1955, eight states reported continued spread to 47 new counties. These states were Alabama, Arkansas, Georgia, Mississippi, Nebraska, Oklahoma, Tennessee and Virginia.

The corn borer, considered by many as a serious pest only to corn, caused considerable damage to pimiento peppers in northern Alabama in 1955. Shipment of peppers had to be discontinued before the entire crop could be harvested.

It also caused a small amount of economic damage in Arkansas during the past season. Although no serious losses occurred, evidence of feeding and lodging was present.

PESTICIDE INSTITUTE

(Continued from page 6)

jury whatever to the corn." He emphasized, however, that this practice is strictly experimental.

B. F. Janson, in a talk on problems involved in the control of diseases of stored grain, said that millions of dollars are lost each year through the heating of grain in storage. Losses are higher in years when Janson said.

Primarily responsible for such heating are molds which he said exist in all grains. "In fact, laboratory tests have revealed that mold organisms are present both on the surface and inside of all harvested wheat," he said. "One team of USDA plant pathologists found from 3,000 to 57,000 mold spores on each kernel of all samples of red winter wheat checked. After the grain had heated, they frequently found several million spores on each kernel."

Growth of such molds is usually retarded by low levels of moisture and temperature, the Ohio scientist said. Even in temperature and moisture levels considerably below those commonly found in stored grain, the molds grow slowly. Some of these molds are known to grow on wheat grains stored at 12% moisture, he said.

Growth of fungi on and in stored grain has many effects, including death of the embryos, rancidity and other kinds of chemical spoilage, Mr. high moisture grain is harvested.

CORN BORER POPULATION BY STATES

	1954 No. of counties surveyed	1954 Average No. of borers per 100 plants	1955 No. of counties surveyed	1955 Average No. of borers per 100 plants	Counties surveyed both years No. of counties	Borers per 100 plants 1954	Borers per 100 plants 1955
Eastern U.S.—							
Connecticut	8	8	8	27	8	8	27
Delaware	3	60	3	241	3	60	241
Maine	..	..	..	..	..	..	..
Maryland	23	41	23	140	23	41	140
Massachusetts	1	4	..	..	..	..	..
New Hampshire	7	46	8	25	7	46	24
New Jersey	12	28	12	177	12	28	177
New York	19	17	14	19	14	17	19
Pennsylvania	29	19	34	68	28	19	62
Rhode Island	5	39	5	131	5	39	131
Vermont	5	4	14	3	5	4	3
Virginia	7	123	*3	155	7	125	155
West Virginia	3	13	3	32	3	13	32
Total	121		145		115		
Average‡‡						33	90
N. Cent States—							
Illinois	44	215	42	339	42	225	339
Indiana	20	102	†6	172	20	102	172
Iowa	‡12	497	‡12	351	99	497	351
Kansas	25	26	18	26	17	29	28
Kentucky	7	52	..	..	..	..	..
Michigan	¶3	69	§5	62	17	69	62
Minnesota	65	72	65	96	65	72	96
Missouri	24	148	23	130	16	184	149
Nebraska	33	353	50	170	33	353	186
North Dakota	21	26	**5	47	19	37	47
Ohio	30	153	30	124	26	159	134
South Dakota	41	394	38	129	37	424	131
Wisconsin	††8	28	††8	82	61	28	82
Total	481		555		452		
Average‡‡						230	183
United States—							
Total	608		700		567		
Average‡‡						190	164

*3 districts representing 21 counties. †6 districts representing 92 counties. ‡12 districts representing 99 counties. ¶3 districts representing 17 counties. §4 districts representing 18 counties. **5 districts representing 19 counties. ††8 districts representing 61 counties. ‡‡Weighted on basis of number of counties.

Hooker Appoints Two

NIAGARA FALLS, N.Y. — Robert E. Noble and John B. Sutherland have been named works manager and sales manager, respectively, of Hooker Chemicals, Ltd., Vancouver, B.C., it has been announced by Bjarne Klaussen, president of Hooker Electrochemical Co., of which Hooker Chemicals, Ltd., is a wholly-owned subsidiary.

The new positions have been created in connection with a new $11,000,000 chlorine-caustic soda plant, the site for which is now being prepared in the District of No. Vancouver, to be completed in early 1957.

Agency Appointed

SAN FRANCISCO—Wilson & Geo. Meyer & Co. has appointed the San Francisco office of Foote, Cone & Belding as its advertising agency, effective immediately. Frank E. Lougee will be the account executive.

Middle West Soil Meeting Program Set for Feb. 16-17

CHICAGO—An attendance of more than 500 is expected at the forthcoming annual February joint meeting of Midwestern college agronomists and fertilizer industry representatives at the Edgewater Beach Hotel here.

The two-day meeting, sponsored by the Middle West Soil Improvement Committee, will be held Feb. 16 and 17. Formal sessions will open Thursday afternoon and run through noon, Friday.

Reports by college agronomists on the latest research to promote more efficient fertilizer use will headline the program. The program will include special reports by soils specialists from four of the MWSIC states—Kentucky, Michigan, Minnesota and Nebraska. Starting this year, it is planned to set up a rotation whereby every three years, all of the 13 MWSIC states will be covered by comprehensive round-up reports on research. Altogether, 10 talks and reports on fertilizer research are scheduled.

Discussion of soil insecticides, their response and new developments in methods of application, will also be featured. Factors that motivate farmers in adopting new and improved methods will come in for attention.

Dr. Kermit C. Berger, University of Wisconsin, will be chairman of the meeting.

W. M. Newman, president of the Middle West Soil Improvement Committee, and Z. H. Beers, executive secretary, will welcome the soils men and visitors.

Of particular interest this year will be a presentation by two Iowa State College specialists on "How Farm People Accept New Ideas." Joseph M. Bohlen and George M. Beal of the economics and rural sociology department will stage the presentation.

Thursday morning, Feb. 16, will be devoted to registrations and an informal meeting of agronomists and industry representatives. On the schedule, too, will be previews of educational movies, film strips or slide sets. MWSIC members and college agronomists are being polled on what visual aids they are interested in showing and viewing.

The Thursday afternoon program will open with special reports on research by agronomists from Kentucky, Nebraska, Minnesota and Illinois. Next will come a discussion of "The Response of Crops to Soil Insecticides," by Dr. J. W. Apple, University of Illinois. "Pastures that Pay" will be the concluding subject on the afternoon program with speakers citing examples of profit-building methods.

Dr. Russell Coleman, executive vice president of the National Plant Food Institute will be the first speaker on the Friday morning program. His subject will be "The Changing Fertilizer Picture and Its Implications." The Bohlen and Beal presentation will follow. Then will come a discussion of "New Developments in Soil Insecticides" by a representative of the Velsicol Corp.

Dr. Earl R. Swanson, of the agricultural economics department, University of Illinois, will be the concluding speaker on Friday morning. His topic will be "Farm Planning for Top Profits."

Friday afternoon will be devoted to a fertilizer mechanical meeting, participated in by industry representatives and engineers of farm implement companies. The meeting will be designed primarily to give the implement industry engineers an opportunity to obtain information that will help them plan and design fertilizer application equipment best suited to farm needs.

ENTOMOLOGIST NAMED

COLUMBIA, MO.—Arthur K. Burditt, Jr. has joined the University of Missouri faculty as assistant professor of entomology. He will expand corn borer research and control programs in the state.

Top Mississippi Corn Producers Receive Awards

STATE COLLEGE, MISS.—Higher corn yields on larger acreages can be a major factor in increasing Mississippi's farm income, agricultural leaders said here at a recent Five-Acre Corn Day program.

"When you make 75 to 100 bu. per acre you can make good money," said L. H. Moseley of Stoneville, district agent of the Agricultural Extension Service.

More than 300 farmers, representing 50 counties, received certificates for producing 75 or more bushels per acre on each of five acres in the Mississippi Five-Acre Corn Contest.

Itawamba County received the largest number of certificates, 33, followed by Holmes with 16 and Jones and Benton with 15 each.

D. A. Lunceford of Webb produced the first place state yield in the contest with 182.54 bu. per acre to win $800 of the $3,600 offered by fertilizer industry members. He averaged more than 125 bu. per acre for his entire crop of 112 acres.

Mississippi's average corn yield this year will be a record high of about 30 bu. per acre, compared with about 15 per acre not many years ago. The state's corn acreage has averaged about two million acres a year for the past five years, only a little less than the state's cotton acreage.

Aviation Conference Set

COLUMBUS — The fifth annual Ohio-Indiana Agricultural Aviation Conference will be held Feb. 22-24 at the Ohio Union on the Ohio State University campus here. Program details are available from the Ohio Aviation Board, 51 Wyandotte Bldg., Columbus.

SAFE PROVES UNSAFE

ALBERT LEA, MINN. — People outside of the fertilizer industry seem to have the idea that there is a lot of money in the plant food business. Accordingly, burglars backed a truck up to the Smith-Douglass fertilizer plant here the other night, jimmied the door, and hauled away an 800-lb. safe into the frigid darkness of a 30-below-zero night. The shivering robbers could have saved themselves considerable amount of muscle-straining had they taken note of one other important fact: the safe was unlocked and there was nothing in it of particular value to the burglars.

WEED SOCIETY

(Continued from page 1)

modities. "Especially valuable is anything research people can develop that will cut the costs of production without increasing output of crops now in surplus," he stated.

Mr. Shaw declared that the uncertainty of consistently good results was a major factor why more farmers do not use chemicals for weed control. This uncertainty must be removed, he said, if farmers are to take advantage of the great potential of chemical weed controls in cutting production costs.

The need for increasing forage yields was described as "tremendous" by the U.S. Department of Agriculture representative. He said that this area of research has hardly been scratched, and he added that chemical herbicides appear at present to be the best answer.

Pointing out the need for more basic information on herbicides and that more attention also needs to be given to application equipment, Mr. Shaw said that "the young science of weed control has a future that is as bright as we wish to make it." He called the lack of trained personnel for carrying on research and education on weed control "one of our most serious problems."

The status of weed control in Canada was discussed by E. G. Anderson, secretary of the National Weed Committee, Ottawa. He said Canada's major problem was weed control in pastures. He noted that there are presently 324 herbicidal products registered in Canada.

Mr. Anderson said that about 35% of weed infested acreage in the three prairie provinces and British Columbia, and about 5% of the acreage in eastern Canada were being sprayed. He put forth the cautious suggestion that these percentages would increase next year by an additional 10% in each case to 45% and 15%. Natural pasture or uncultivated land in western Canada being sprayed was approximately 14 million acres, and in eastern Canada about 300,000 acres.

It was stated that 71,600 lb. of TCA were used in 1955 and that 283,000 acres were treated with MCP. A decrease was noted in aircraft treatment in Manitoba, Saskatchewan and Alberta. In 1955, 263,000 acres were treated by aircraft in comparison to 394,000 acres during 1954. Aircraft treatment was done on 1.9% of total acreage treated.

The Canadian representative said that sprays were utilized last year on 96.2% of the acreage, with dust formulations used on the remaining 3.8%, esters accounted for 92.6% of acres treated. Mr. Anderson also noted that there was an increase of over 29% in use of chlorate-boron compounds in 1955 over the previous year in Manitoba, Saskatchewan and Alberta.

Regional problems and progress of weed control in the U.S. were discussed by a four-man panel moderated by M. W. Parker, Agricultural Administration Field Crops Research Branch, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md. Panel members were B. H. Grigsby, associate professor, Michigan State University, East Lansing; R. J. Aldrich, agronomist, Field Crops Research Branch, Agricultural Research Service, U.S. Department of Agriculture, and Rutgers University, New Brunswick, N.J.; W. B. Ennis, Jr., agronomist, Field Crops Research Branch, Agricultural Research Service, U.S. Department of Agriculture, and Mississippi State College, State College, and W. A. Harvey, extension agronomist, University of California, Davis.

Mr. Grigsby, reporting on weed control in the North Central Region, said that the limiting factor preventing increase in the use of chemicals for weed control in that region was the problem of educating the public and transferring practical information into active programs.

Among the increasing weed problems was mentioned the serious spread of aquatic weeds. The Michigan State professor said that little interest has been shown in controlling these types of weeds. He saw need for satisfactory weed control in onions, which he described as having the worst problem in vegetables.

The Northeastern Region's most pressing problems were in horticultural and agronomic crops, according to Mr. Aldrich. He reported rapid increase of horse nettle in this area.

Discussing crops underseeded with legumes, he mentioned that alfalfa was being extended to acres not presently fitted to that crop. He indicated that farmers are favoring one general legume.

Failure of farmers to use more chemical herbicides in pastures was blamed on lack of information on their use in relation to other practices.

Mr. Aldrich said that annual weeds pose the biggest problem in corn. Nutgrass was reported increasing rapidly in potato fields, and current chemical post-emergence controls of this weed were said to be costly.

Commenting on the $150 million annual business of Northeastern flower and nursery stock operations, Mr. Aldrich noted that relatively little was being done in this field. Existing herbicides may be considered for application in this instance, he said.

The agronomist concluded his panel report by calling attention to the fact that in the region covered by the Northeastern Weed Control Conference, there is an average of only one person per state devoting full time to weed control work, either in extension or in research.

Southern weed problems were discussed by Mr. Ennis. He suggested that costs of chemical weed controls in cotton with present herbicides should be lowered, and urged the development of more satisfactory controls for late season problems. Application equipment needs greater versatility, more adaptability to smaller farms and should be available at lower cost, he said.

Weeds in soybean crops were said to be presenting serious harvesting problems. Only a small amount of acreage is now treated, Mr. Ennis said. The need for satisfactory weed controls for late season weeds was also emphasized.

The need for application technique

minimize drift problems when g 2,4-D was defined as urgent. was reported that use of this com- nd is increasing. Also seen as ded were safer and more effective trols for use with undersown mes.

Mr. Harvey presented the final el report. He described manpower develop and refine methods of weed trol in 11 western states as "a efully inadequate force in view of problems that exist."

Hand weeding of vegetables in the st was pointed out as common ctice. Chemical control methods ve been developed for only a few the crops, Mr. Harvey said. He w this group as "a wide open field." ed was the lack of a chemical ed control on a commercial scale lettuce, a major vegetable crop the western states with an annual lue of over $100 million.

The University of California ex- nsion agronomist said he knew one grower of ornamentals who ent $800 an acre weeding stock. ot unusual, he said, were weed- g costs of $400 per acre.

On the 400 million acres of western ngeland, major problems cited were ush intrusion, poisonous plants, edy grasses of little or no feed ue and noxious weeds. Value of se lands was said to be low and was suggested that chemical treat- nts must be cheap if they are to used on a large scale.

Concluding his report, Mr. Harvey d that it must be remembered that field of weed control "is a new d and support will lag behind the mands for a long time to come."

The chemical industry's views of dern weed control were expressed Dr. M. T. Goebel, research direc- , Grasselli Chemicals Department, I. du Pont de Nemours & Co., Inc., lmington, Del.

Dr. Goebel advised industry to be particularly alert to the oppor- nity for service" that the field of eed control offers. He emphasized at industry must cooperate with ualified investigators and indus- y's customers to apply chemicals vailable in the best way and in e proper situations.

"A real opportunity for cutting oduction costs" was seen by Dr. ebel in possible reduction of pre- rvest man hours for cotton. He also ed that the number of man hours uired for vegetable production in s country increased by 8% from 1 to 1950. Controlling weeds, he d, is perhaps the largest single m in the costs of vegetable pro- ction.

The Du Pont research director de- red that the "chemical industry st take for granted the fact that of the largest single cost items the development of chemicals for riculture is the research necessary assure that these chemicals can be rketed without introducing a haz- d to health."

Discussing research, Dr. Goebel d "we must aim to meet the need ot simply to develop a product to admired."

Educational problems in weed ntrol were reviewed by W. G. estmoreland, assistant professor, orth Carolina State College. He id that "a major part of the edu- tional problem is the training of rsonnel at the county or com- unity level. Most of these leaders the present have had no formal ining in weed control as we see today. Some have had training systemic botany, plant physi- gy and chemistry, but fail to rrelate this training with our esent day science of weed con- l.

Both extension and the industry e an obligation to these indi- uals since they are the people who er are using the chemicals and ctices or are expected to properly inform the users concerning weed control.

"From information presently available, it is generally believed that this is a major 'bottleneck' and a definite problem which can be solved through an expanded educatfonal program in vocational education, undergraduate and graduate training. Much of the education for these people will necessarily be 'how' to do followed by less demand for 'why.'

"Approaches toward educating the public in weed control include: (1) an increasing agreement and broad mindedness among workers within the field; (2) greater emphasis on training 'specialists' for weed control work; (3) an offering by educational institutions of more training in weed control as a practical endeavor; (4) more practical information supplied quickly to those local educators and leaders who may begin to put the information into use; (5) a continuing effort to inform the farmer, or user, of the potentials of the field if 'tailored' to his production practices; (6) a more thorough effective means of keeping trained personnel well informed; (7) an increased youth activity program handled through existing organizations."

Professor W. E. Loomis of Iowa State College, Ames, presented a slide-illustrated talk on the mechanism of herbicidal action. Five aspects discussed by the professor were retention of spray on leaf surfaces, penetration into the leaf, possible detoxification of herbicides within the plant, chemical or physiological reactions which may accompany detoxification, and translocation of the herbicide in the plant.

At the business meeting, which concluded the first day's sessions, the society's membership accepted the proposed constitution. Standing and special committees also presented their reports.

Those attending the Jan. 4 general session were welcomed by Robert H. Beatty, American Chemical Paint Co., Ambler, Pa., president of the Weed Society of America, and by John D. Van Geluwe, GLF Soil-Building Service, Ithaca, N.Y. Other officers of the national group are W. B. Ennis, Jr., Mississippi State College, vice president, and W. C. Shaw, Agricultural Research Service, USDA, Beltsville, Md., secretary-treasurer.

MORE IRRIGATION

AUBURN, ALA.—Despite plentiful rainfall in most sections, more Alabama farmers than ever before started irrigating pasture and cropland during 1955. According to Lawrence Ennis, Alabama Polytechnic Institute, extension agricultural engineer, irrigation equipment for 17,000 acres was bought by growers last year. He said the 1955 acreage is 35% above that put under irrigation the previous year and the largest figure for any one year.

Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Plant Nutrient Report Encouraging

In its preliminary report on fertilizer consumption for the fiscal year 1954-55, the U.S. Department of Agriculture states that although total tonnage was down a little, use of plant nutrients showed a considerable gain. The report (Croplife, Jan. 2, page 1 and page 6 this issue) says that despite a drop of 305,000 tons in quantity, plant nutrient use went up 151,000 tons, or 2.6% over the figures of the previous year.

This is a significant statistic from a number of standpoints. In the first place, the increase in plant nutrient content in a smaller number of tons of fertilizer confirms the fact that higher grades of fertilizers are being used in American agriculture and that the industry and its sales force are gaining ground in their efforts to promote the use of high-analysis goods.

Since these mixtures are higher priced, it means that a lot of good solid selling has had to be employed. Convincing a farmer that an 80 lb. bag of fertilizer costing quite a lot more than he formerly paid for the same sized bag is not a particularly easy assignment. Yet, that is what is happening all around the country, and the growers are finding that the higher analyses are paying off. The tough job is to get those first sales.

The increase in plant nutrients was achieved during a period when farmers were being convinced by politicians that disaster was just around the corner. True, drouth in many sections of the country did slow down sales and the cost-price squeeze is very real; but the encouraging thing is that fertilizer sales are not following as closely as they once did, the farm income curve.

It is apparent that although consumption of both fertilizers and pesticides will be affected to a certain extent by the condition of farm income, still the relationship is not as close as it was in former years. Application of both fertilizers and pesticides is being regarded more and more as an essential part of agriculture, rather than "special" activities to be indulged in only when there is extra money to toss around for luxury items.

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The USDA report, though not announcing the setting of any new consumption records, does contain this element of optimism. Makes good reading on gloomy January days.

Deliveries Now May Save Bottlenecks

In an editorial appearing here a few weeks ago (Dec. 19 to be exact), the boxcar crisis was outlined, pointing out that come next spring, the competition for rail facilities for transporting fertilizer materials is likely to be terrific. The moral was, that any ordering and shipping done before the inevitable rush will take just that much pressure off the industry later.

The Middle West Soil Improvement Committee has added some facts and figures to our general warning that box cars are none-too-plentiful. It says in a release (page 9, this issue) that "the shortage of freight cars could become so severe in the months immediately preceding spring, that fertilizer producers might not be able to move raw materials in needed volume from phosphate and potash mines to factories."

Such a situation could, of course, mean localized shortages of plant food at the precise time when farmers need it most.

Just how bad is the shortage? The MWSIC says that the lack of cars exceeded 20,000 at times last fall, when carloading totals were soaring. The same, or even more acute, lack could be with us this spring when peak demand is on.

Right now, however, the demand is seasonally slow and the strain on rail freight facilities is eased somewhat.

This winter breathing spell could give fertilizer manufacturers their very best opportunity to get materials from the mines in uninterrupted volume, if advantage is taken of the situation. Then, if delivery of finished fertilizers is maintained in the weeks ahead, to dealers and to farms, factory production schedules may be kept high enough to meet the spring demand.

Transportation specialists report that the freight problem is complicated by a shortage of steel that is hampering production and delivery of new cars to the railroads. Some car builders are reported down to a quarter to half of their production capacity.

While it is true that the railroads have a backlog of orders for some 140,000 cars early this year, it is estimated that delays will cause these deliveries to extend into 1957. Meanwhile, thousands of disabled and worn out cars are being sidetracked waiting for repairs, and others in surprising numbers are being scrapped.

Thus, at the risk of being repetitious, we throw out this added reminder to fertilizer manufacturers who can manage to get their raw materials delivered early. So doing may save a lot of frenzied worry later.

Miller Law Does Not Mean More Seizures

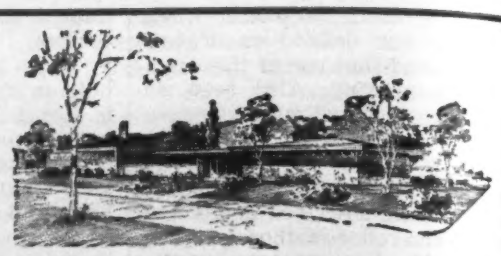
Some misconceptions about the workings and objectives of Public Law 518, otherwise known as the Miller Amendment to the Federal Food, Drug and Cosmetic Act, seem to be held yet by the public. One of the questions we have heard concerns whether or not the new law will increase the possibility of Federal Government seizure of crops in interstate commerce.

A clear and concise answer to this query has been given by W. B. Rankin, assistant to the administrator of the Food and Drug Administration. In a recent appearance at the meeting of the Vegetable Growers Association of America, he said, "There is one element of misunderstanding about the new law that all of us can help clear up. Many people are under the impression," he said, "that this new law sets up some new requirement about pesticide in foods and that it will render crops in interstate commerce more likely to be seized by the Federal Government.

"As a matter of fact," he said, "the new law does not change the basic requirement of the Federal Food, Drug and Cosmetic Act that foods in interstate commerce shall be free of dangerous quantities of spray residues. This requirement has been a part of the basic statute since it was enacted in 1938.

"What the new law does is to set up a more convenient method of determining what is a safe residue and announcing this safe level or tolerance to the public."

Mr. Rankin's explanation should help dealers to give farmer inquirers an encouraging answer when the question is raised. With definite residue tolerances already set on some crops, the grower must pay closer attention to how much pesticide he applies, but that does not mean he need fear using insecticides and fungicides for better pest control.



Croplife

ABP *Member of Business Publications Audit*

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

Jan. 10-11 — Michigan Insecticide-Fungicide Conference, Kellogg Center, Michigan State University, East Lansing, Mich.

Jan. 10-11—Eighth Annual North Carolina Pesticide School, North Carolina State College, Raleigh.

Jan. 11-12—Wisconsin Insect Control Conference, Lorraine Hotel, Madison, Wis.

Jan. 15-17 — New Mexico Grain & Feed Dealers Assn., Annual Convention, Hilton Hotel, Albuquerque, with Special Portion for Fertilizer and Farm Chemical Dealers; H. B. Hening, Albuquerque, Secretary.

Jan. 15-18—Northwest Vegetable Insect Conference, Portland, Ore.

Jan. 16-18—Southern Weed Conference, Ninth Annual Meeting, Hotel Jung, New Orleans; Dr. E. G. Rodgers, Florida Agricultural Experiment Station, Gainesville, Secretary-Treasurer.

Jan. 16-20—Minnesota Weed & Seed Inspectors Short Course, University of Minnesota, St. Paul.

Jan. 17—Georgia Plant Food Educational Society, Annual Meeting, University of Georgia, Athens, Ga., Fielding Reed, American Potash Institute, Mortgage Guarantee Bldg., Atlanta 3, Ga., secretary-treasurer.

Jan. 18—Western Oregon Fertilizer Dealer Meeting, Sponsored by the Pacific Northwest Plant Food Assn., Oregon State College, Corvallis, Ore.

Jan. 18-20 — Western Cooperative Spray Project, Imperial Hotel, Portland, Ore.

Jan. 26-27—Custom Spray Operators Training School, University of Illinois.

Jan. 26-29 — Agricultural Aircraft Assn., Inc., Sixth Annual Convention, Wilton Hotel, Long Beach, Cal.; Wanda Branstetter, Route 3, Box 1077, Sacramento, Cal., Executive Secretary.

Jan. 27 — Colorado Agricultural Chemicals Assn., Cosmopolitan Hotel, Denver.

Jan. 30 — Wisconsin Fertilizer and Lime Dealers Conference, Memorial Union, University of Wisconsin, Madison, Wis.

Jan. 30-31—National Cotton Council of America, Annual Meeting, Buena Vista Hotel, Biloxi, Miss.

Jan. 30-Feb. 3—Purdue Pest Control Operators School, Purdue University, Lafayette, Ind.

Feb. 6-8—Agronomy Section, Association of Southern Agricultural Workers, Atlanta (Ga.), Biltmore Hotel; W. E. Colwell, North Carolina State College, Secretary.

Feb. 6-8—Cotton State Branch, Entomological Society of America, Biltmore Hotel, Atlanta, Ga.; W. G. Eden, Alabama Polytechnic Institute, Auburn, Ala., secretary-treasurer.

Feb. 7-9 — National Garden Supply Trade Show, Kingsbridge Armory, New York City.

Feb. 14-16 — Agricultural Chemicals Conference, Lubbock, Texas.

Feb. 15-17—California Weed Control Conference, Sacramento and Davis, Cal.; Oliver A. Leonard, Botany Dept., University of California, Davis, Cal., secretary.

Feb. 15-17 — Western Weed Control Conference, Sacramento and Davis, Cal.; W. C. Robacker, U.S. Department of Agriculture, Nevada Agricultural Experiment Station, Reno, Nev., secretary-treasurer.

Feb. 16-17 — Middle West Soil Improvement Committee's annual joint meeting of the fertilizer industry and Universities; Edgewater Beach Hotel, Chicago.

Feb. 20-21 — Southwestern Branch, Entomological Society of America, Hotel Texas, Fort Worth, Texas.

Feb. 22-24—Fifth Annual Ohio-Indiana Agricultural Aviation Conference, Ohio Union, Ohio State University, Columbus.

Feb. 22-24—Alabama Pest Control Conference; Alabama Polytechnic Institute, Auburn, Ala.

Feb. 22-24—Midwestern Chapter, National Shade Tree Conference; LaSalle Hotel, Chicago; Noel B. Wysong, Cook County Forest Preserve, River Forest, Ill., secretary.

March 6-7—Fifth Annual Western Cotton Production Conference, Fresno Hacienda, Fresno, Cal.

March 14-18 — National Agricultural Chemicals Assn., Spring Meeting; Hollywood Beach Hotel, Hollywood, Fla.; Lea S. Hitchner, NAC executive secretary, 1145 19th St. N.W., Washington 6, D.C.

March 28-30—North Central States Branch, Entomological Society of America, Purdue University Memorial Union, Lafayette, Ind.

April 10-12—Council for Agricultural and Chemurgic Research, 21st Annual Conference; Congress Hotel, Chicago; Sec., John W. Ticknor, Council for Agricultural and Chemurgic Research, 350 Fifth Ave., New York 1, N.Y.

May 16-18—Synthetic Organic Chemical Manufacturers Assn., Annual Outing, Skytop, Pa.

June 10-13—National Plant Food Institute, Annual Convention, the Greenbrier, White Sulphur Springs, W. Va.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

July 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

July 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

Aug. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

Nov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., Secretary.

INDEX OF ADVERTISERS

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.

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American Potash Acquires 100% of Western Electrochemical Stock

LOS ANGELES—Completion of the acquisition of 100% of the stock of Western Electrochemical Co., Henderson, Nev., by American Potash & Chemical Corp. through exchange of shares has been announced by Peter Colefax, president of both companies. American Potash & Chemical Corp., which had owned 48.2% of Western Electrochemical's common stock, issued 33,295 shares of its Class B stock to acquire the balance.

Mr. Colefax also announced that the name of Western Electrochemical Co. has been changed to American Potash & Chemical Corp. (Nevada) in order to facilitate the integration of the new company's activities into those of the parent organization, and that the Nevada company's products will be sold under the "Trona" brand name through the sales organization of American Potash & Chemical Corp.

The products manufactured by American Potash & Chemical Corp. (Nevada) at its plant in Henderson include ammonium and potassium perchlorate, sodium and potassium chlorate and manganese dioxide.

HOPPER CONTROL

FARGO — It is estimated that North Dakota farmers in 22 counties sprayed 79,200 acres of crops to control grasshoppers, according to North Dakota Agricultural College entomologists.

SOYBEAN PRODUCTION COST

URBANA—Cost account records show that about a 17-bu. yield is needed to pay the cost of producing an acre of soybeans in central Illinois.

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The farmer with fat, flat, fertile acres removes hundreds of pounds of nitrogen and other plant foods from every acre with every harvest. Nitrogen-rich ARCADIAN Fertilizers enable these heavy users of plant food to provide nitrogen growing power in the soil quickly, easily and at low cost. High volume builds extra profit for you.

Farmers with hilly or small fields usually need plenty of nitrogen-rich fertilizers to improve the soil and to boost yields to a profitable level. You can build a consistent, regular market for economical ARCADIAN Fertilizer products that produce erosion-controlling, soil-building plant cover and profitable yields of forage or other crops.

Big farmers and small operators alike g special advantages with speedy new ways applying ARCADIAN high-nitrogen ferti lizers. You can sell big farmers URAN Nitro gen Fertilizer Solution and a spray rig to fee 100 or 200 acres per day for top yields. Sma farmers make a good market for custom ap plication of ARCADIAN Fertilizers.

Growers of specialty crops like fruit need nitrogen above all other plant foods. ARCADIAN high-nitrogen products make quick, easy work of feeding nitrogen to large or small plantings, by a variety of methods of application. You can sell ARCADIAN Nitrogen for spray, ground, airplane or hand applications, as well as for use in irrigation water.

Vegetable growers are heavy users of nitrogen-rich fertilizers since most of their crops are heavy nitrogen feeders. Concentrated ARCADIAN products feed these crops well with far less lugging, lifting and hauling. They provide higher value per pound as fertilizer and higher cash income for you per bag or per tank.

Farmers who plan their operations care fully for crop profits and soil conservation ar good users of fertilizer. They know the hig income-producing value and low cost of con centrated, nitrogen-rich fertilizers in th ARCADIAN line. This year, sell ARCADIA to make more money for yourself and for you customers.

POWERFUL ARCADIAN ADVERTISING – bigger than ever in 1956 – gives you strong backing for extra sales of high-nitrogen ARCADIAN products that provide profits for every season and every system of application. Every acre is a market for low-cost, fast-spreading, labor-saving ARCADIAN Fertilizers. Write for details on the complete ARCADIAN line.

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